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(54) Title: METHODS AND APPARATUSES FOR PROVIDING A CUSTOMIZED PRODUCT COMBINATION TO A CONSUMER

(57) Abstract: Methods for providing a customized product to a consumer including the steps of collecting consumer profiling data, determining a consumer profile category corresponding to the consumer profiling data, providing the consumer a list of products corresponding to the profile category, receiving from the consumer a product choice, identifying additional consumer profiling data corresponding to the selected product choice, and providing the consumer a customized product corresponding to the additional consumer profiling data and the selected product choice. Apparatus is also discussed for providing the customized product to a consumer accordingly.

METHODS AND APPARATUSES FOR PROVIDING A CUSTOMIZED PRODUCT COMBINATION TO A CONSUMER

TECHNICAL FIELD

The present invention relates generally to methods and apparatuses for providing customized products and services in commerce; and will specifically be disclosed as methods and apparatuses for providing customized product combinations and product-related services to a consumer on an individualized and interactive basis.

BACKGROUND OF THE INVENTION

Consumers typically have limited control in the composition of products and services which they purchase and use. Manufacturers of products for mass consumption for example, generally provide pre-formulated or otherwise predetermined products and do not allow the consumer to customize or tailor the formulation or features to his or her needs and desires. This inability to customize products leads to less effective products which do not account for all of the relevant factors that influence the efficiency and satisfaction in use of the product.

In addition, consumers are typically treated as routine and non-special when purchasing products and services, as only a limited set of predetermined choices are generally offered on a universal basis. The products and services cannot and do not reflect the consumer's psychological and physiological conditions on anything approaching an individualized basis as a consequence. Most products today are mass marketed to large portions of the purchasing market, and individual consumers are forced to ferret out effective products through trial and error. Currently, consumers do not have the ability to customize a product and thereby optimizing the performance and overall satisfaction of the product and shopping experience to take in account of the various environmental and physiological conditions of the consumer.

This problem is exemplified in the women's beauty care product market. These products typically are marketed by specific versions of a product to a predetermined group of consumers for specific psychological and physiological conditions and are typically sold in pre-packaged forms for off-the-store-shelf selection. These products are pre-formulated to correspond with a limited number of factors directed to mass appeal, and therefore do not correspond to the exact needs of the consumer. For example, a shampoo may be formulated for color-treated hair, but may fail to take in account of other physiological conditions (such as hair texture, hair damage, hair length, etc.) which factor into the overall performance of

the product and satisfaction of the consumer. This can lead to consumer frustration and potentially can cause more real or perceived harm than benefit from the product. On the other hand, a particular version of the product may also provide satisfactory results to another group of consumers, but the consumers are unaware of the product due to the targeted marketing of the product to another group of consumers, which results in the consumer being forced to ferret out effective and satisfactory products.

Many women prefer to choose beauty care products on a one-to-one (in person, with the assistance of an experienced consultant) basis. Information on color shade, oiliness and other physiological properties of the skin and hair are vital to providing an effective cosmetic facial product. In addition, certain environmental conditions can effect the performance of the products. For example, water hardness can effect the lather on shampoo and facial cleansers.

On the other hand, some women prefer to purchase their beauty care products without the assistance of others. For example, the consumer may be embarrassed to discuss with another person available product options which may overcome a specific physiological condition or concern of the consumer. At the same time, the consumer desires a level of customer service which is tailored to her preferences and purchasing feedback. Currently, there is a limited ability for a consumer to shop for customized beauty products on her own and with individualized guidance.

The virtual explosion of technical advances in microelectronics, digital computers and software have changed the face of modern society. In fact, these technological advances have become so important and pervasive that this phenomenon is sometimes referred to as "the information revolution." Through telephone lines, networks, satellite communications and the like, information and resources are ever increasingly being accessed and shared.

With the growing advance of the "information revolution", there is a need to provide customized products to consumers for purchase on their own without the assistance of others, yet with reliable and personalized service and results.

SUMMARY OF THE INVENTION

Accordingly, it is an object of the present invention to provide novel methods and apparatuses for providing customized products and services to consumers which overcome one or more disadvantages of the prior art. It is another object of the invention to provide novel methods and apparatuses for providing a personalized product-related service and products.

Another object of the present invention is to provide improved interactive structures and methods which enable the provision to individual customers, customized products and services based on input of needs, preferences and physiological and environmental conditions corresponding to such customer at the time.

An additional object of the present invention is to provide a novel method and apparatus to enable delivery of a customized product based upon personal data provided and obtained from a customer, where both objective and subjective variables can be accounted for to optimize the efficiency of the product and perceived satisfaction for the customer.

These and additional objects and advantages are provided by the methods and apparatuses for providing a customized product combination of the present invention.

One aspect of the present invention is the method of providing a customized product combination to a consumer. In a preferred embodiment, the method comprises the steps of collecting consumer profiling data about a consumer. A consumer profiling category is then determined which corresponds to the consumer profiling data. The consumer is provided a list of one or more products that correspond to the consumer profiling category. A product choice selected from the list is received from the consumer. Additional consumer profiling data from the consumer which corresponds to the selected product choice is identified. The consumer is provided a customized product which corresponds to the additional consumer profiling data and the selected product choice.

Another aspect of the present invention is the method for a personalized product-related service. In a preferred application, the method comprises the steps of obtaining psychological and physiological information of a consumer. A personalized profile is created for the consumer from the attitudinal and physiological information. A customized user interface corresponding to the personalized profile of the consumer is provided. The customized user interface comprises information pages which are customized to correlate the psychological and physiological information of the consumer. The consumer is provided with a list of interaction options which correlate to the personalized profile of the consumer. An interaction choice is received from the consumer. Upon completion of the interaction choice, the consumer is provided a survey to illicit further feedback data corresponding to the interaction choice. The feedback data is received from the consumer. The personalized profile and the customized user interface are modified based on the feedback data received from the consumer.

Another aspect of the present invention is an apparatus for providing customized products to a consumer. In one preferred arrangement, the apparatus comprises a data repository for storing one or more consumer profiles; an input device for receiving user

input from a consumer; a computer assembly comprising a CPU and memory, wherein the computer assembly is connected to the data repository and the input device; a computer-readable storage medium containing computer executable instructions for the computer assembly; and a display means for displaying suggested products corresponding to the consumer profile which can be selected and customized by the consumer.

Yet another aspect of the present invention comprises a network-based method for providing a customized product to a consumer. In an exemplary illustration, the method comprises the steps of providing a web site having a user interface, wherein the user interface includes consumer identification data. One or more items of consumer information are received at the user interface from a consumer. It must first be determined whether the consumer is a new user to the user interface. If so, a unique consumer profile is created in a data repository for the consumer. Once the consumer's profile is created in the data repository, it will be accessed whenever that consumer "signs on" in response to the consumer identification data of the consumer. A unique web site is provided, wherein the web site has a customized user interface according to the consumer profile for the consumer. The consumer profile in the data repository is also periodically updated with additional profile information as received during interactions and/or other transactions with the consumer. A list of recommended product choices which correspond to the updated consumer profile is provided to the consumer, and a selected product choice is received from the consumer. The consumer is then provided with one or more customizing options for the selected product, and, in turn, one or more selected customizing options received from the consumer. The selected product is prepared with the customized options for the consumer and the customized product is delivered to the consumer.

Another aspect of the present invention is a method suitable for use in electronic shopping for providing customized product-related services to a consumer. The method comprises collecting personalized data about the consumer, wherein at least a portion of the data pertains to at least one predefined category of products or services. The personalized data is compared to a data repository, wherein the data repository comprises the predefined product and/or service categories. The consumer is analyzed based upon the data and a predefined product category is determined and selected from the product categories in the data repository. The selected product category is transparent (i.e., not revealed) to the consumer, however, as that categorization is only utilized internally to the system. The consumer interacts through an interactive user interface which is customized for the consumer and corresponds to the selected product category. The customized user interface is periodically modified based upon personalization data supplied by the consumer,

purchasing choices by the consumer, demographic data, feedback data, and/or a combination thereof.

Still other objects, advantages and novel features of the present invention will become apparent to those skilled in the art from the following detailed description, which is simply by way of illustration, various modes contemplated for carrying out the invention. As will be realized, the invention is capable of other different obvious aspects all without departing from the invention. Accordingly, the drawings and descriptions are illustrative in nature and not restrictive.

BRIEF DESCRIPTION OF THE DRAWINGS

While the specification concludes with claims particularly pointing out and distinctly claiming the present invention, it is believed that the same will be better understood from the following description taken in conjunction with the accompanying drawings in which:

Fig. 1 depicts a simplified flowchart of the steps performed in an exemplary method of providing a customized product combination to a consumer in accordance with the present invention;

Fig. 2 depicts a simplified flowchart of the additional steps performed in a preferred embodiment of the method of providing a customized product combination to a consumer in accordance with the present invention;

Fig. 3 depicts a simplified flowchart of the additional steps which are preferably performed in a preferred embodiment of the method of providing a customized product combination to a consumer in accordance with the present invention;

Fig. 4 depicts a simplified flowchart of the steps performed in another preferred embodiment of the method of providing a customized product combination to a consumer in accordance with the present invention;

Fig. 5 depicts a simplified flowchart of the steps performed by the method for a personalized product-related service in accordance with the present invention;

Fig. 6 is a schematic illustration of a computer system suitable for use with the present invention;

Fig. 7 is a schematic illustration of an apparatus for providing customized products to a consumer in accordance with the present invention;

Fig. 8 is a schematic illustration of an apparatus for providing customized products to a consumer in accordance with the present invention;

Fig. 9 depicts a simplified flowchart of the steps performed by an exemplary network-based method for providing a customized product combination to a consumer in accordance with the present invention;

Fig. 10 depicts a simplified flowchart of the steps performed by a method suitable for use in electronic shopping for providing customized product-related services to a consumer in accordance with the present invention;

Figs. 11 and 12 depict illustrations of an exemplary consumer profiling questionnaire for use in the present invention;

Figs. 13 and 14 depict illustrations of exemplary additional profiling data specific to a product category to be obtained from a consumer;

Fig. 15 depicts an illustration of an exemplary list of products corresponding to the consumer profiling data obtained in accordance with the present invention;

Fig. 16 depicts an illustration of an exemplary product specific questionnaire for a selected product in accordance with the cosmetic application;

Fig. 17 depicts an example of a user interface showing a customized product and providing the consumer the option to further customize the product in the cosmetic application;

Figs. 18 and 19 depict illustrations of exemplary user screens for customizing options provided to the consumer in accordance with the present invention;

Fig. 20 depicts an illustration of an exemplary list of products corresponding to the consumer profiling data in which the product has been customized in accordance with the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Reference will now be made in detail to various embodiments of the invention, an example of which is illustrated in the accompanying drawings, wherein like numerals indicate the same element throughout the views.

One embodiment of the present invention is illustrated in the flowchart of Fig. 1 which depicts a method of providing a customized product combination to a consumer in accordance with one aspect of the present invention. The method comprises the steps of collecting consumer profiling data (30) about a consumer. Consumer profiling data may be collected through a user interface, direct interaction over a telephone, in-person consultations, E-mail, handwritten questionnaires, test kits, etc. The consumer profiling data preferably comprises psychological preferences and physiological conditions of the consumer. For example, in a beauty care example, the physiological data comprises hair

length, hair type, hair color, eye color, skin type, skin attitude, etc. Preferred psychological data comprises preferred colors and styles, lifestyle, life stage, attitude, desired look of hair, desired look of face and level of involvement. A consumer profiling category is then determined (34) which corresponds to the consumer profiling data. To determine the consumer profiling category, the consumer's responses to the profiling data inquiries are matched against a decision tree. The decision tree comprises potential combinations of the consumer responses to the consumer profiling information. Preferably, the decision tress are converted to mathematical algorithms which the process the decision trees electronically to ascertain the appropriate category to assign the consumer. The decision trees for initial category profiles preferably are based on historical consumer research data for consumers having similar factors. The consumer may be assigned various profile sub-categories which correspond to specific product categories (such as hair care, skin care, cosmetics, fragrances, etc.). The consumer is provided a list of one or more products (40) that correspond to the consumer profiling category. In a preferred embodiment, the list of products comprises consumer services (such as film development). In a more prefered embodiment, the list of products comprises consumer goods (such as beauty care products, clothing, electronics, etc.). Preferably, the list of products is retrieved from a data repository of consumer profiles. The list of products corresponds to a specific profile category or sub-category. A product choice selected from the list is received (42) from the consumer. The selection may be through a user interface such as a web browser or kiosk, or through direct interaction such as during a telephone call. Additional consumer profiling data (31) which corresponds to the selected product choice is identified from the consumer. The additional profiling data comprises product form, feature and expectation preferences. Typical form preferences comprise the type of the product (such as 2-in-1 shampoo and conditioner, foaming cleanser or lotion for facial cleanser, etc.). Preferred feature preferences comprise UV protection in cosmetic or skin care products, level of fragrance in the product, etc. In one embodiment, the additional profiling data is identified and collected through a user interface in which the consumer is presented questions which elicit the consumer profiling data. The collection of the additional profiling data may also comprise mailing surveys or test kits to a consumer, in-person consultation, or direct interaction such as during a telephone call. The consumer is provided a customized product (50) which corresponds to the additional consumer profiling data and the selected product choice.

Fig. 2 illustrates further aspects of a preferred embodiment of the present invention which shows additional steps for providing a customized product combination of Fig. 1. The method further comprises providing the consumer specification options (44) for the

base-customized product. Instructions from the consumer are received (45) with respect to the one or more specification options for the customized product. Illustrative specification options for the cosmetic product example comprise color of the product, scent of the product, scent level of the product, addition of glitter or similar additive to the product, addition of micro beads to the product, or addition of one or more supplements to the products. Supplements might include biobotanicals, beta hydroxy products, organic products, vitamins and minerals. One skilled in the art will appreciate that other known specification options and additives may be added to the customized product. The final customized product is then delivered (48) to the consumer. Delivery may comprise immediately presenting the completed product to the customer, such as at a kiosk or customer service window, shipping the product to the consumer, mailing the product, having the consumer pick up the product, or any other method of product delivery known to one skilled in the art.

It should be noted that, while many of the examples herein are set forth in an exemplary context of cosmetic products, the present invention is contemplated as being equally applicable to any of a variety of products and services. As used herein, the term "specification" shall connote the combination of elements, features and/or characteristics of a product which may be modified to customize the product to particular performance or preference choices of the consumer.

Further aspects of a preferred embodiment of the present invention are depicted in Fig. 3, which shows the additional steps for providing a customized product combination of Fig. 1, comprising providing the consumer one or more finishing options (46) for the selected base-customized product. Exemplary finishing options for the cosmetic product example would include choice of packaging of the customized product, choice of product labeling options and choice of product wrapping options. More preferred finishing options might include choice of package shape, size, color and functionality. Preferably the choice of functionality would itself comprise the choice of dispensing devices, such as squeeze tube or pump. In addition, preferred examples of labeling options comprise selection of label shape, color, design and text. Preferred embodiments of the product wrapping options might comprise selection of design, selection of wrap color and material. One skilled in the art will appreciate that other known finishing options and additives may be added to the customized product.

Another preferred embodiment of a method according to the present invention is depicted in Fig. 4, wherein consumer profiling data is collected (30) from the consumer as discussed above. Consumer profiling data may be collected through a user interface, direct

interaction over a telephone, in-person consultations, E-mail, handwritten questionnaires, test kits, etc. Preferably, the consumer completes a survey and/or utilizes and submits results from a test kit which contains questions and tests which yield consumer profiling data. Preferably, the consumer is at least initially presented an electronic survey at a user interface. The consumer profiling data comprises psychological, physiological and attitudinal information about the consumer. Preferred consumer psychological and attitudinal information comprises personality information, visual preferences, expectation information, etc. This consumer profiling data is analyzed and a consumer profile category is determined (34). To determine the consumer profiling category, the consumer's responses to the profiling data inquiries are matched against a decision tree. The decision tree comprises potential combinations of the consumer responses to the consumer profiling inquiries. Preferably, the decision trees are converted to mathematical algorithms which process the decision trees electronically to ascertain the appropriate category to assign the consumer. The decision trees for initial category profiles preferably are based on historical consumer research models and data for consumers having similar factors. The consumer may be assigned various profile sub-categories which correspond to specific product categories (such as hair care, skin care, cosmetics, fragrances, etc.). More preferably, a neural network determines which consumer profile category to assign the consumer. The neural net assesses feedback data from the consumer to determine if any changes to the mathematical algorithms or new product categories are needed to meet the needs of the consumer. For example, a neural network can continuously update its decision making algorithm by incorporating consumer feedback, purchasing trends, and demographic information into the decision making process. According to Haykin, S. (1994), *Neural Networks: A Comprehensive Foundation,* NY: Macmillan, p. 2, a neural network is a massively parallel distributed processor that has a natural propensity for storing experiential knowledge and making it available for use. It resembles the brain in two respects: 1) Knowledge is acquired by the network through a learning process. 2) Interneuron connection strengths known as synaptic weights are used to store the knowledge. The neural network analyzes product trends, feedback data, demographic data and other additional data to develop and refine algorithms for decision making. In a preferred embodiment, the neural network automatically makes changes to the customized user interface and decision making algorithms.

The consumer is provided a list of products (40) which correspond to the consumer profile category of the consumer. Preferably, the list of products which correspond to a specific consumer profile category are stored in a data repository. The list of products

corresponds to a specific profile category or sub-category. Preferably, the list of products is based on historical consumer profiling models and data. More preferably, the list of products corresponds to the consumer's physiological conditions, lifestyle, life stage and desired look. The product choice of the consumer (42) is received from the list of products. The product choice indicates which product the consumer would like to customize. Additional consumer profiling data is identified (31) to customize the selected product to meet the consumer's physiological conditions and external conditions (such as water hardness, etc.). Preferably, the consumer is presented questions which elicit the additional consumer profiling data. The questions may be preferable stored in a data repository and the consumer's responses are stored in the consumer's profile category in the data repository. The consumer is then presented on the user interface a base-customized product (50) which corresponds to the additional consumer profiling data and the selected product choice. In a preferred embodiment, the consumer can then choose to purchase the product or choose to further customize the product. If the choice is to purchase at that time, details of the product packaging, labeling and dispensing options can be determined by default to a predetermined combination and/or in accordance with prior obtained consumer profiling data.

If the consumer chooses to further customize the product, the consumer is provided one or more specification options (44) for the customized product. Instructions from the consumer are received (45) with respect to the one or more specification options for the customized product. Preferred specification options for our cosmetic example can comprise color of the product, scent of the product, scent level of the product, addition of glitter or similar additive to the product, addition of micro beads to the product, or addition of one or more supplements to the products. Preferred supplements include biobotanicals, organic products, vitamins and minerals. One skilled in the art will appreciate that other known specification options and additives may be added to the customized product.

The consumer is thereby provided one or more finishing options (46) for the customized product. Instructions are received (47) from the consumer with respect to the one or more finishing options. Preferred finishing options for the cosmetic application might include choice of packaging of the customized product, choice of product labeling options and choice of product wrapping options. More preferred finishing options include choice of package shape, size, color and functionality. Preferably, the choice of functionality further comprises the choice of dispensing devices, such as a squeeze tube or a pump. In addition, preferred embodiments of labeling options comprise selection of label shape, color, design and text. While some text, such as contents and other information

required by applicable laws might be included on all products, other elements can be options (such as font size, font type and color, etc.). Preferred embodiments of the product wrapping options comprise selection of design, selection of wrap color and materials of construction. One skilled in the art will appreciate that other known finishing options and additives may be added to the customized product.

In another preferred embodiment of the present invention, the collection of profiling data about a consumer comprises providing the consumer a test kit. In the application of the invention for cosmetic products, for example, the test kit might comprise one or more tests to determine physiological conditions of the consumer such as skin dryness, skin oiliness, hair dryness, hair oiliness, brittleness of hair and color complexion of the consumer. Preferably, such a test kit would also comprises additional environmental tests (such as water hardness, water pH, etc.) which effect the performance of beauty care products. In one preferred embodiment of the invention for cosmetic products, the test kit is delivered to the consumer and the consumer then provides the results and input from such test through the user interface. Preferably, the consumer enters the results electronically or provides the results through voice communication, for example over the telephone. Alternatively, the consumer might receive the test kit at a central location, where all or a portion of the tests are completed. In addition, the test kit may be personally delivered to the consumer and the tests performed by trained specialists. In yet another preferred embodiment, the consumer might submit one or more items from the test kit to a testing center for analysis. Preferred analysis to be completed by the testing center for such an application might comprise skin dryness, skin oiliness, hair dryness, hair porosity, hair oiliness, and skin tone color matching.

Another embodiment of the present invention is a method for a personalized product-related service as depicted in Figure 5. This method creates a personalized shopping experience for the consumer. First, personal information about the consumer is obtained (30). Preferably, this information comprises psychological and physiological information about the consumer, such as preferred colors and styles, lifestyle, life stage, attitude, desired look of hair, desired look of face, skin type, skin condition, hair type, hair condition, fashion style and level of involvement. Preferably, the level of involvement comprises the number of products the consumer may use to achieve a desire outcome and the amount of time the consumer will spend to achieve the desired outcome. A personalized profile is created (34) from this personalized information. The consumer is then provided with a unique and customized user interface (36) with customized information pages based at least in part on the personalized information and profile. Every option presented to the

consumer can then be appropriately customized to correspond to the consumer's personalized profile. Customizable options include imagery, tone, design of text, name personalization, general lifestyle information, beauty care information, etc. The user interface also preferably provides the consumer with a list of interaction options (37) that correspond to the personalized profile. Preferably, the list of interaction options is stored in the data repository and corresponds to a specific profile category or sub-category. Preferably, the list of interaction options corresponds to the consumer's physiological conditions, lifestyle, life stage and desired look. An interaction choice is received from the consumer (38) and a customized interaction is provided to the consumer (70). Upon completion of interacting with the selected interaction choice, the consumer is provided a consumer feedback survey (55), which might be in the form of multiple choice inquiries derived from a data repository of further personalized information categories and preferences stored in the computer. Preferably, feedback questions are designed to optimize the customization of the interaction and satisfaction of the consumer. Feedback information is collected both voluntarily and prompted. Preferably, every interaction is followed by feedback data which is then utilized to learn the consumer's preferences and optimize the consumer's experience. As an example, the survey might comprise questions about recent purchases of customized products. The questions might comprise questions on how the consumer liked the product, any problems encountered using the product, overall satisfaction for the product, and possible ways to improve the product. For example, in a hair care product model, the feedback survey may comprise questions inquiring whether the shampoo had too much or too little lather, whether the cleaning level was satisfactory, and whether the shampoo delivered the desired effectiveness The feedback data in the survey is received from the consumer (57). Preferably, this feedback data is used to make modifications or suggestions for modifications to the personalized profile of the consumer and the customized user interface (60). Preferably, this feedback data comprises performance and aesthetic attributes for the product. The feedback data preferably is used by human analysis to determine modifications to the consumer profile and to recommend addition customized products. In a more preferred embodiment, the feedback analysis will be conducted by a mathematical algorithm and/or decision trees. Preferably, if the feedback comprises a neutral or negative response from the consumer, additional product feedback information will be gathered from the consumer and possible alternative products will be recommended to the consumer. In a preferred embodiment, the interaction options (37) provided to the consumer comprise a predetermined list of products available for the consumer to customize. The available products can be updated and modified at any time

and will periodically be improved and supplemented with new or additional choices. The customizable products correspond to the personalized profile of the consumer. Preferably, after the consumer selects one of the products, the consumer is provided with one or more specification options for the selected product. Preferably, the consumer is also provided with one or more finishing options for the selected product. The finishing options for the selected product are preferably stored in a data repository. The user interface retrieves the corresponding options from the data repository for the selected product.

Often computers telecommunicate with each other and share information, applications and/or services. Sometimes in this setting, the various computers are referred to as nodes, which is a generic term referring to a point in a interconnected system. One type of computer network employs a client/server architecture, wherein the portions of network applications that interact with human users are typically separated from the portions of network applications that process requests and information. Often, the portions of an application that interact with users or access network resources are called client applications or client software, and portions of an application that process requests and information are called server applications or server software. Client machines tend to run client software and server machines tend to run server software, however a server can be a "client" as well. In a preferred embodiment of the invention, the consumer's user interface is on a client machine and the software containing the computer instructions which comprise the methods according to the present invention is located on a server computer.

Fig. 6 illustrates a sample client/server network 10. As one with ordinary skill in the art will readily appreciate, a client/server network is only one type of network, and a variety of other configurations, such as peer-to-peer connections, are also considered networks. In a client/server network, a plurality of nodes are interconnected such that the various nodes send and/or receive information to/from one another. As shown here, a server node (12) is interconnected to a plurality of client nodes (14) using a connection (16) such as a token ring, Ethernet, telephone modem connection, radio or microwave connection, or the like.

A computer-readable medium, shown here as a floppy diskette (18), holds information readable by a computer, such as programs, data, files, etc. As one with ordinary skill in the art will readily appreciate, computer-readable medium can take a variety of forms, including magnetic storage (such as hard disk drives, floppy diskettes, etc.), optical storage (such as laser discs, compact discs, etc.), electronic storage (such as random access memory "RAM", read only memory "ROM", programmable read only memory "PROM", etc.), and the like. Some types of computer readable medium, which are sometimes

described as being nonvolatile, can retain data in the absence of power so that the information is available when power is restored.

Another embodiment of the present invention might comprise an apparatus for providing customized products to a consumer as schematically depicted in Figure 7. The apparatus (62) comprises a data repository (24) storing one or more consumer profiles; an input device (28) for receiving user input from a consumer; a computer assembly (22) comprising a CPU and memory, wherein the computer assembly (22) is connected to the data repository (24) and the input device (28); a computer-readable storage medium (18) containing computer executable instructions for the computer assembly (22); and a display means (26) for visually interacting with a consumer, such as for displaying suggested products which can be selected and customized by the consumer. Preferably, the computer assembly (22) is a general purpose computer. Preferably, the display means (26) is a computer monitor, video display terminal, or other appropriate display device. Preferably, the data repository (24) includes a relational database system or a distributed directory such as Novell Directory Services (NDS). A relational database management system (RDBMS) is a computer database management system that uses relational techniques for storing and retrieving data. Relational databases are computerized information storage and retrieval systems in which data in the form of tables are typically stored for use on disk drives or similar mass data stores. A "table" includes a set of rows spanning several columns. Each column in a table includes "restrictions" on the data contents thereof and may be designated as a primary or foreign key. Reference is made to C. J. Date, *An Introduction to Database Systems*, 6th edition, Addison-Wesley Publishing Co. Reading, Mass. (1994) for an comprehensive general treatment of the relational database art. An RDBMS is structured to accept commands to store, retrieve and delete data using high-level query languages such as the Structured Query Language (SQL). The term "query" denominates a set of commands for retrieving data from a stored database. The SQL standard has been promulgated by the International Standards Association since 1986. Reference is made to the SQL-92 standard "Database Language SQL" published by the ANSI as ANSI X3.135-1992 and published by the ISO as ISO/IEC 9075:1992 for the official specification of the 1992 version of the Structured Query Language. Reference is also made to James R. Groff et al. (LAN Times guide to SQL, Osborne McGraw-Hill, Berkeley, Calif., 1994) for a lucid treatment of SQL-92.

In a preferred embodiment, the input device (28) would comprise a keypad, keyboard, or similar input means to allow a consumer to input information and respond to interactive communications. In another embodiment, the input device would comprise a

microphone with voice recognition software. This embodiment would allow those with certain physical limitations or disabilities to interact with the user interface. More preferably, the input device (28) comprises a keyboard on a computer in electronic communication with the computer assembly (22). In another preferred embodiment of the present invention, the input device (28) is associated with a user kiosk or a service window or module. A kiosk is a small, self-standing structure such as a newsstand or ticket booth, while service windows and modules are intended to include drive up, walk up, or other customer service accommodations which may be self-standing or associated with other related or unrelated places of business (for example department stores, waiting rooms of doctor's offices, etc.). Unattended multimedia kiosks typically dispense public information via computer screens or other user interface media. Either a keyboard, touch screen, voice recognition and/or a combination of each are typically used for input. Preferably, the input device (28) is associated with an electronic communication device for accessing the computer assembly (22). In a preferred embodiment, the input device (27) further comprises a touch tone telephone which allows the consumer to order products through a touch tone ordering system.

In another preferred embodiment, the apparatus further comprises a communication node (27), which can be located at a point of manufacturing of the products to provide quick and optimal communication of product formulation and finishing options from the consumer to the manufacturing location. The communication node preferably comprises an additional input device and display device. Preferably, a customer service representative interacts with the consumer through the communication node (27).

Another embodiment of the present invention is depicted in Fig. 9, where a network-based method for providing a customized product combination to a consumer is illustrated. The method comprises the steps of providing a web site having a user interface (20), wherein the user interface includes consumer identification data. One or more items of consumer information are received (30) at the user interface from a consumer, and an analysis is conducted (32) to determine whether the consumer is a new user to the user interface. A unique consumer profile is then created (34) and stored in a data repository for the consumer, if the consumer a new to the user interface. That unique consumer profile is then available to be accessed (35) from a data repository upon input of the consumer identification data of the consumer. During the first session, the unique consumer profile would be created and then used for that initial session. A unique web site having a customized user interface corresponding to the consumer profile for the consumer is preferably provided (36), and the consumer profile in the data repository is updated (31)

with additional profile information. Preferably, the consumer profile is continually updated during the consumer's interactions with the customized user interface. A list of recommended product choices which correspond to the updated consumer profile is then provided (40) to the consumer. The list of recommended product choices is compiled by a retrieving from a data repository, a list of predetermined product choices corresponding to the particular product category. A selected product choice from the list is thereafter received (42) from the consumer once he or she considers the products listed. The consumer is thereafter provided with one or more customizing options (39) for the selected product. The customizing options are stored in a data repository. The data repository stores each customizing option available for each product available to consumers. Each of the customizing options will have one or more choices for the particular customizing option. One or more selected customizing options are received (41) from the consumer. The selected product is then prepared (50) with the chosen customized options and the customized product is thereafter delivered (48) to the consumer. In a preferred embodiment, the customization option provided to the consumer (39) comprises specification options (44) and finishing options (46). These specification and finishing options are retrieved from a data repository wherein the specification and finishing options for the specific product are stored.

One preferred embodiment of the present invention is a customized user interface for providing a customized product combination. An example of this is a web server and a web browser on the Internet. The Internet and World Wide Web operate on a client/server model. The consumer runs a web client, or browser, on a electronic device such as a computer or television tuner. The web browser contacts a web server and requests data information, in the form of a Uniform Resource Locator (URL). This data information comprises the customized user interface comprising the customizable product choices which correspond to the consumer. URLs are typed into the browser to access web pages, and URLs are embedded within the pages themselves to provide the hypertext links to other pages. Many browsers exist for accessing the Web. Examples of browsers include the Netscape Navigator from Netscape Communication Corp. and the Internet Explorer from Microsoft Corp. Numerous web servers exist for providing content to the World Wide Web. Examples of servers include Apache from the Apache Group, Internet Information Server from Microsoft Corp., Lotus Domino Go Webserver from IBM, Netscape Enterprise Server from Netscape Communications Corp., Oracle Web Application Server from Oracle Corp. and Red Hat Linux from Red Hat Corp.

Consumer input is received through the user interface and is then received at the web server. The web server then interprets the consumer input and delivers to the consumer corresponding web pages. In a preferred embodiment, the web server may push the consumer input over to another analysis device such as a neural net to process the consumer input.

Another embodiment of the present invention includes a method suitable for use in electronic shopping for providing customized product-related services to a consumer as depicted in Fig. 10. Personalized data about the consumer is collected (30) in a manner similar to that described above. Preferably, the personalized data pertains to at least one of the pre-defined profile categories. The personalized data is compared (32) to other personalized data in the data repository to determine if the consumer has an assigned or established profile in the system. Preferably, at least a portion of the personalized data comprises a username and password. The username and password are compared with usernames and passwords in the data repository to determine if there is a match. If a match is found, the corresponding profile for the consumer will be retrieved from the data repository. The collected data pertaining to the consumer is then analyzed and a pre-defined profile is selected (34) from the profile categories in the data repository. The selected profile is transparent (i.e., not revealed) to the consumer, however, as that categorization is only utilized internally to the system. A customized user interface is then provided through which the consumer interacts (36), and that the user interface is preferably customized for the consumer based upon the selected profile. The consumer is then provided with a unique and customized user interface (36) with customized information pages based at least in part on the personalized information and profile. Every option presented to the consumer can then be appropriately customized to correspond to the consumer's personalized profile. Customizable options include imagery, tone, design of text, name personalization, general lifestyle information, beauty care information, etc. The user interface also preferably provides the consumer with a list of interaction options that correspond to the personalized profile. Preferably, the list of interaction options is stored in the data repository and corresponds to a specific profile category or sub-category. More preferably, the list of interaction options corresponds to the consumer's physiological conditions, lifestyle, life stage and desired look. Preferably, the user interface is periodically modified (60) for the particular consumer based upon personalized data supplied by the consumer, purchasing choices made by the consumer, demographic data, feedback data, and/or a combination thereof.

Another embodiment of the present invention comprises a computer-readable storage medium containing computer executable code for instructing a computer to perform the following steps: collecting consumer profiling data about a consumer; determining a consumer profile category corresponding to the consumer profiling data; providing the consumer a list of one or more products that correspond to the consumer profile; receiving from the consumer a product choice selected from the list; identifying additional consumer profiling data from the consumer which corresponds to the selected product choice; and providing the consumer a customized product corresponding to the additional consumer profiling data and the selected product choice. In a preferred embodiment of the present invention, the computer-readable storage medium further comprises computer executable code for instructing a computer or similar functional device to perform the following additional steps: providing the consumer one or more specification options for the customized product; and receiving from the consumer instructions with respect to the one or more specification options for the customized product. The computer-readable storage medium might further preferably comprise instructions to perform the following additional steps: providing the consumer one or more finishing options for the customized product; and receiving from the consumer instructions with respect to the one or more finishing options for the customized product. As detailed above, in this way, additional features and characteristics of the products, services, labeling and packaging can be individualized for the consumer.

In another embodiment of the present invention, a computer-readable storage medium comprises computer executable code for instructing a computer to perform the following steps: providing a web site having a user interface, wherein the user interface requests consumer identification data; receiving at the user interface one or more items of consumer identification data from a consumer; determining if the consumer is a new user to the user interface; creating a unique consumer profile in a data repository for the consumer, if the consumer is a new user; accessing from a data repository the unique consumer profile corresponding to the consumer identification data of the consumer; providing a unique web site having a customized user interface for the consumer according to the consumer profile; periodically updating the consumer profile in the data repository with additional profile information; providing to the consumer a list of recommended product choices corresponding to the updated consumer profile; receiving from the consumer a selected product choice; providing the consumer with one or more customizing options for the selected product; receiving from the consumer one or more selected customizing options; preparing the selected product with the customizing options for the consumer; and

delivering the customized product to the consumer. In a preferred embodiment, the customizing options also comprise specification options and finishing options, as discussed above.

In our example of a preferred embodiment of the present invention for application in the cosmetics or beauty care field, a consumer accesses a web site for customized beauty care products. The web server determines if this particular customer has previously registered as a user or if the particular consumer is a new user to the web site. If the consumer is a new user, the web server delivers web pages to the consumer's web browser requesting registration information from the consumer. Preferably, this registration information comprises at least the consumer's name, address and a unique username and password. The username and password may be chosen by the consumer or the web server. The registration information also comprises consumer profiling information, which might include physiological and psychological information about the consumer and preferences. Figs. 11 and 12 depict exemplary embodiments of web pages containing inquiries for eliciting such consumer profiling information.

Once the web server has received the appropriate consumer profiling information, the web server determines a consumer profile category to assign the consumer. To determine the consumer profiling category, the consumer's responses to the profiling data inquiries are matched against a decision tree. The decision tree comprises potential combinations of the consumer responses to the consumer profiling information. Preferably, the decision tress are converted to mathematical algorithms which process the decision trees electronically to ascertain the appropriate category to assign the consumer. The decision trees for initial category profiles preferably are based on historical consumer research data for consumers having similar factors. The consumer may be assigned various profile sub-categories which correspond to specific product categories (such as hair care, skin care, cosmetics, fragrances, etc.). This consumer profile category is customized to correspond to the consumer's profiling data. It is contemplated that the profile category can be a set of internal categorizing parameters or guides which are utilized in the system to identify lists of products, services and/or features and options thereof which will be suggested or offered to the consumer as appropriate during a transaction or shopping event. As this categorization is highly proprietary to the system, subject to continual updating and change based on products or service changes, updates, enhancements, and/or on changing needs or preferences of the consumer, it is preferably maintained as "transparent" to the user, and is provided only indirectly via a customized web site tailored to the consumer profiling data and product or service correspondence determined by the system. The web site provides the

consumer a list of individualized interaction options from which the consumer may choose. Exemplary interaction options for beauty care products might include customization of skin care, hair care, cosmetic and fragrance products. When the consumer selects an interaction option, the web server delivers further customized web pages to the consumer corresponding to the selected interaction option. When the consumer selects an interaction option which comprises customized products, the web server determines if the consumer has created a personalized profile specific to the selected product option. Preferably, the personalized profile contains physiological (for example skin dryness, skin concerns such as acne or pimples, hair color, eye color, skin tone, skin sensitivity, etc.) and additional psychological information (for example color preferences, degree of involvement such as number of products and time spent using products, etc.) about the consumer. Figs. 13 and 14 depict illustrations of exemplary web pages comprising a personalized profile for cosmetic products. Preferably, the personalized profile is customized for the consumer's profile category. When the consumer has completed the personalized profile, the web server determines which types of cosmetic products would match the consumer's personalized profile.

The consumer is then provided with a list of products or services which match the consumer's personalized profile. Fig. 15 depicts a illustration of a preferred example of a web page listing the products which match a particular consumer's personalized profile. Preferably, the list of products will indicate if the product requires (or has available) further customization before the product can be purchased. In Fig. 15, the product image is out of focus and fuzzy, which indicates to the consumer that the product is not ready to be purchased. In another preferred embodiment, the user interface may comprise audio interaction and response. Preferably, the consumer interacts with the user interface through a microphone and speakers. This embodiment is particularly beneficial to consumers who have difficulty utilizing other input devices or have difficulty reading from the user interface. In another embodiment of the present invention, an image of the consumer is displayed and the consumer can make product selections and the virtual results are displayed on the image of the consumer. Preferably, the user interface will depict how the products will look on the consumer to help define the consumers preferred look. In another embodiment, the consumer alters the image to produce the desired look and then is provided with a list of products which should achieve the desired look. Preferably, this list is determined by a mathematical algorithm which yields one or more corresponding profile categories.

When the consumer selects a product to customize, the web server receives the request from the consumer and determines whether the consumer has completed a personalized profile for the selected product. Preferably, the personalized profile for the selected product comprises additional physiological and environmental data which aids in the completion of the customization of the selected product. If the consumer has not completed a personalized profile for the selected product, the web server solicits additional information such as by providing the consumer with a survey or questionnaire requesting additional information to aid in customizing the product and/or to identify preferences. Fig. 16 depicts an example of a questionnaire for additional information to customize a hair shampoo product.

When the consumer has submitted the additional personalized data requested, the web server determines the proper formulation and/or elements for the selected product. Preferably, this product combination is customized to correspond to the consumer's physiological and environmental conditions. In another preferred embodiment, the specifications for the selected product is delivered to a manufacturing facility, where the customized product is manufactured and packaged. In yet another preferred embodiment, a computer determines if the customized product specification matches any pre-defined versions of the selected product. If the computer determines that a specific version matches the customized formulation for the selected product, the matching version of the product is provided to the consumer. Preferably, the product is free of any proprietary identifications as to formulation or version of the product. In a preferred embodiment, if a pre-existing version does not exist which matches the consumer's needs and desires, a new version of the product will be created to match the consumer's needs and desires.

Once the product itself has been specified, the consumer is given the option to purchase the customized product or to further customize the product with specification and finishing options. Fig. 17 depicts an illustration of and an exemplary web page providing the consumer a choice of purchasing the customized product or the option of further customizing the product. Preferably, the customization options comprise both specification and finishing options. Preferred specification options for our cosmetic example can comprise color of the product, scent of the product, scent level of the product, addition of glitter or similar additive to the product, addition of micro beads to the product, or addition of one or more supplements to the products. Preferred supplements include biobotanicals, organic products, vitamins and minerals. One skilled in the art will appreciate that other known specification options and additives may be added to the customized product. Preferred finishing options comprise package shape and functionality, labeling options and

product wrapping options. Figs. 18 and 19 depict illustrations of additional exemplary web pages comprising customizing options for a hair shampoo product. When the consumer has finished customizing the product, the consumer is given the opportunity to purchase the product. The product is the provided to the consumer. Preferred methods of delivery include mail, overnight delivery, consumer pick-up, hand delivery, or consumer pick-up of the product at a retail environment such as a beauty salon or spa.

On subsequent interactions with the consumer, the web pages preferably indicate which products have been previously customized by the consumer and are ready to purchase. As discussed, the user interface may indicate which products are available for purchase and which products are currently not available or ready for purchase. In a preferred embodiment, one or more products may be available for immediate purchase and not require customization. Preferred products not requiring customization include brushes, barrettes, and facial scrubs. Fig. 15 depicts an illustration of an example of a web page indicating that the selected product requires further customization, whereas, Fig. 20 depicts and an illustration of a similar web page indicating that the customized product is available for immediate purchase.

After a customized product has been provided to the consumer, feedback data is requested from the consumer. For example, the various ways of requesting feedback data might comprise inquiries via voice communication, direct mail, electronic mail and additional web pages requesting feedback on the web site. The feedback data is preferably processed by a neural network. In a preferred embodiment, the neural network suggests changes to the consumer profiling algorithms and customized user interface.

The foregoing description of the various embodiments of the invention has been presented for the purposes of illustration and description. It is not intended to be exhaustive or to limit the invention to the precise form disclosed. Many alternatives, modifications, and variations will be apparent to those skilled in the art of the above teaching. For example, it is contemplated that any of a wide variety of products or services could equally be substituted for the beauty care products discussed in the examples above, including but not limited to other consumer products such as cleaning products of all kinds, food products, beverage products, electronics, appliances, hardware supplies, tools, etc. While it is believed that the present invention may be more valuable in conjunction with products and services which are needed and purchased by any particular consumer on and an on-going basis, it is contemplated that the invention is applicable to any product or service which can be personalized and customized to particular user's needs and preferences. Accordingly,

this invention is intended to embrace all alternatives, modifications, and variations that have been discussed herein, and others that fall within the spirit and broad scope of the claims.

What is claimed:

WHAT IS CLAIMED IS:

1. A method of providing a customized product combination to a consumer comprising the steps of:

collecting consumer profiling data about a consumer;

determining a consumer profile category corresponding to the consumer profiling data;

providing the consumer a list of one or more products that correspond to the consumer profile category;

receiving from the consumer a product choice selected from the list;

identifying additional consumer profiling data from the consumer which corresponds to the selected product choice; and

providing the consumer a customized product corresponding to the additional consumer profiling data and the selected product choice.

2. The method of claim 1, further comprising the steps of:

providing the consumer one or more specification options for the customized product; and

receiving from the consumer instructions with respect to the one or more specification options for the customized product.

3. The method of claim 2, wherein one of the specification options comprise choice of color of the customized product, comprise choice of scent of the customized product, comprise addition of glitter to the customized product, comprise addition of micro beads to the customized product, comprise addition of one or more supplements to the customized product, or a combination thereof.

4. The method of claim 3, further comprising the choice of scent level of the customized product.

5. The method of claims 1 – 4, further comprising the steps of:

providing the consumer one or more finishing options for the customized product; and

receiving from the consumer instructions with respect to the one or more finishing options further for refining the customized product.

6. The method of claim 5, wherein one of the finishing options comprise choice of packaging of the customized product, comprise choice of label options of the customized product, comprise choice of product wrapping for the customized product, or a combination thereof.

7. The method of claim 6, wherein the choice of packaging comprises choice of one or more of color, size, shape and functionality.

8. The method of claim 7, wherein choice of functionality further comprises choice of dispensing device.

9. The method of claim 6, wherein the label options comprise a user selectable design, comprise a user selectable color, comprise customized text on the label, or a combination thereof.

10. The method of claim 6, wherein the wrapping comprises a user selectable design.

11. The method of claim 2, further comprising the steps of:

providing the consumer one or more finishing options for the customized product; and

receiving from the consumer instructions with respect to the one or more finishing options further for refining the customized product.

12. The method of claim 11, wherein one of the specification options comprise choice of one or more of color, scent, and scent level of the customized product, comprise addition of glitter to the customized product, comprise addition of micro beads to the customized product, comprise addition of one or more supplements to the customized product, or a combination therof.

13. The method of claim 11 or 12, wherein one of the finishing options comprise choice of packaging of the customized product, comprise choice of label options of the customized product, comprise choice of product wrapping for the customized product, or a combination thereof.

14. The method of claim 11, 12, or 13, wherein the choice of packaging comprises choice of one or more of color, size, shape and functionality, choice of functionality further

comprises choice of dispensing device, the label options comprise a user selectable design, the label options comprise customized text on the label, or a combination thereof.

15. The method of claim 14, wherein the wrapping comprises a user selectable design.

16 The method of claim 1, wherein the step of determining a consumer profile category comprises implementation of a mathematical algorithm.

17. The method of claim 16, further comprising the steps of:

obtaining consumer feedback data from the consumer on the selected product; and

incorporating the consumer feedback data into the consumer profiling data and the mathematical algorithm.

18. The method of claims 1 - 17, wherein collecting profiling data about a consumer comprises in-person testing of the consumer for physiological data.

19. The method of claims 1 - 18, wherein collecting profiling data about a consumer comprises providing a test kit for use by the consumer.

20. The method of claim 19, herein the test kit comprises a water hardness test, a skin dryness test , a skin oiliness test, a skin tone test, a device to acquire a photographic image of the consumer, a computerized color matching module, or a combination thereof.

21. A method for implementing a personalized product-related service comprising the steps of:

obtaining profiling information from a consumer;

creating a personalized profile for the consumer based upon the profiling information;

providing a customized user interface corresponding to the personalized profile of the consumer, wherein the customized user interface comprises information pages which are customized to correlate to the profiling information of the consumer;

providing the consumer a list of interaction options which correlate to the personalized profile of the consumer;

receiving from the consumer at least one interaction choice;

providing the consumer an interaction corresponding to the interaction choice;

presenting the consumer with a survey for eliciting feedback data corresponding to the interaction choice;

receiving the feedback data from the consumer; and

modifying the personalized profile and the customized user interface based on the feedback data received from the consumer.

22. The method of claim 21, wherein the step of obtaining profiling information from a consumer further comprises the step of obtaining psychological and physiological information from a consumer.

23. The method of claim 22, wherein the step of obtaining psychological and physiological information from a consumer comprises the steps of the consumer completing a survey and utilizing a test kit, wherein the survey comprises questions corresponding to psychological information of the consumer and the test kit comprises tests which yield physiological information of the consumer.

24. The method of claims 21 - 23, wherein the interaction options comprise a list of products available to customize which correspond to the personalized profile of the consumer.

25. The method of claims 21 - 24, further comprising the steps of:

receiving from the consumer a product selected from the list;

providing the consumer one or more specification options for the selected product; and

receiving from the consumer instructions with respect to the one or more specification options for the selected product.

26. The method of claims 21 - 25, further comprising the steps of:

receiving from the consumer a product selected from the list;

providing the consumer one or more finishing options for the selected product; and

receiving from the consumer instructions with respect to the one or more finishing options for the selected product.

27. The method of claims 21 - 26, wherein the step of creating a personalized profile for the consumer comprises the additional steps of:

determining if the consumer has an existing personalized profile; and

retrieving the personalized profile, if the consumer has an existing personalized profile.

28. An apparatus for providing customized products to a consumer, wherein the apparatus comprises:

a data repository storing one or more consumer profiles;

and an input device for receiving user input from a consumer;

a computer assembly comprising a CPU and memory, wherein the computer assembly is connected to the data repository and the input device;

a computer readable storage medium containing computer executable instructions for the computer assembly; and

a display in communication with the computer assembly for displaying suggested products to the consumer corresponding to the consumer profile and which can be selected and customized by the consumer and to facilitate interaction with the consumer via the input device.

29. The apparatus of claim 28, wherein the input device comprises a keypad or keyboard.

30. The apparatus of claims 28 - 29, wherein the input device is associated with a user kiosk.

31. The apparatus of claims 28 - 30, wherein the input device is associated with an electronic communication device for accessing the computer assembly.

32. The apparatus of claims 28 - 31, further comprising:

a second connection node for relaying ordering information, wherein the second display means is connected to the computer assembly.

33. A network-based method for providing a customized product combination to a consumer comprising the steps of:

providing a web site having a user interface, wherein the user interface includes consumer identification data;

receiving at the user interface one or more items of consumer identification data from a consumer;

determining if the consumer is a new user to the user interface, and creating a unique consumer profile in a data repository for such new user;

each time thereafter, accessing from the data repository the unique consumer profile corresponding to the consumer identification data of the consumer;

providing a unique web site having a customized user interface for the consumer according to the consumer profile;

periodically updating the consumer profile in the data repository with additional profile information;

providing to the consumer a list of recommended product choices corresponding to the updated consumer profile;

receiving from the consumer a selected product choice;

providing the consumer with one or more customizing options for the selected product;

receiving from the consumer one or more selected customizing options;

preparing the selected product with the customizing options for the consumer; and

delivering the customized product to the consumer.

34. The method of claim 33, wherein the customizing options comprise specification options and finishing options.

35. A method suitable for use in virtual shopping for providing customized product-related services to a consumer, comprising:

collecting personalized data about the consumer pertaining to at least one predetermined product category;

comparing the personalized data to a data repository, wherein the data repository comprises product categories;

analyzing the consumer based upon the personalized data and determining a product category selected from the predetermined product categories in the repository, wherein the consumer is not informed of the determined category;

interacting with the consumer through and an interactive user interface which is customized for the consumer based upon the determined category; and

periodically modifying the user interface accessible by a particular consumer based upon at least one of the personalization data supplied by the consumer, purchasing choices made by the consumer, demographic data, feedback data, and a combination thereof.

36. The method of claim 35, wherein the modifying step is undertaken during a current virtual shopping transaction.

37. The method of claim 35, wherein the modifying step is undertaken following and an virtual shopping transaction for display in a future transaction.

38. The method of claims 1 – 27, wherein collecting the profiling data about a consumer comprises collecting the data electronically.

39. The method of claim 38, wherein collecting the data electronically further comprises collecting the data over a network.

40. The method of claims 1 - 20 wherein the profiling data comprises psychological and physiological data.

41. The method of claims 21 - 27, wherein receiving feedback data further comprises an exchange of electronic communication containing the survey questions.

42. The method of claims 21 – 27 and 41, wherein receiving feedback data further comprises voice communication with the consumer.

43. The method of claims 21 – 27 and 41 - 42, wherein the step of providing the consumer a survey further comprises requesting feedback data on a subsequent interaction with the consumer.

44. A computer-readable storage medium comprising computer executable code for instructing a computer to perform the method of any of claims 1 – 27 and 33 - 43.

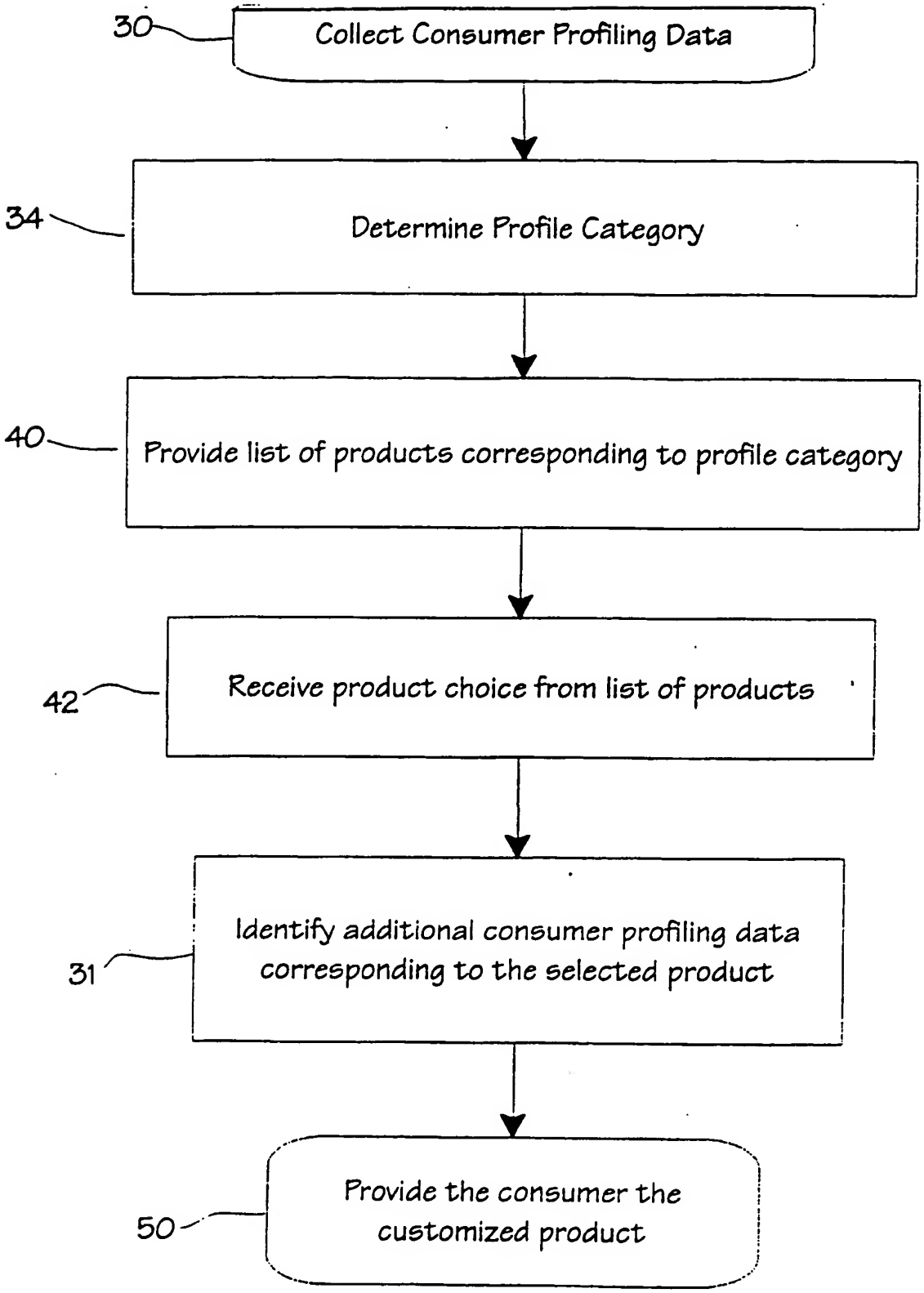
30
Collect Consumer Profiling Data
34
Determine Profile Category
40
Provide list of products corresponding to profile category
42
Receive product choice from list of products
31
Identify additional consumer profiling data corresponding to the selected product
50
Provide the consumer the customized product

Fig.1

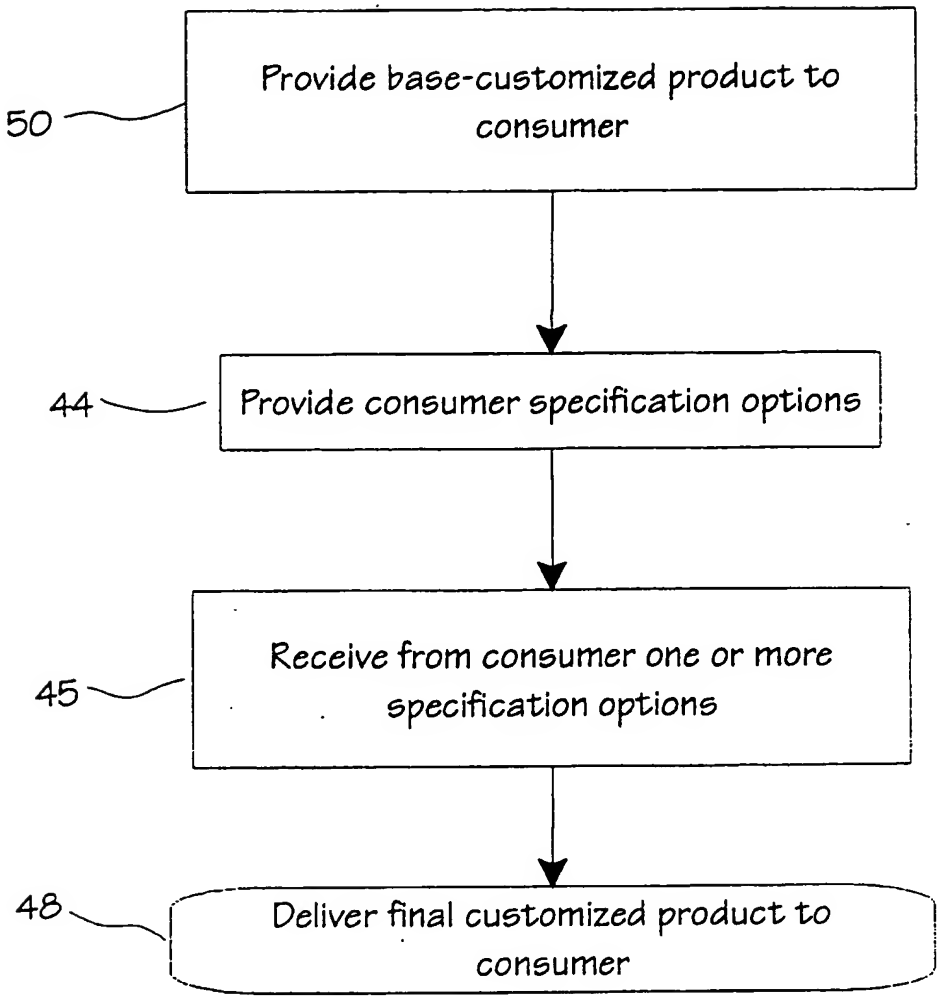
Provide base-customized product to consumer
50
Provide consumer specification options
44
Receive from consumer one or more specification options
45
Deliver final customized product to consumer
48

Fig. 2

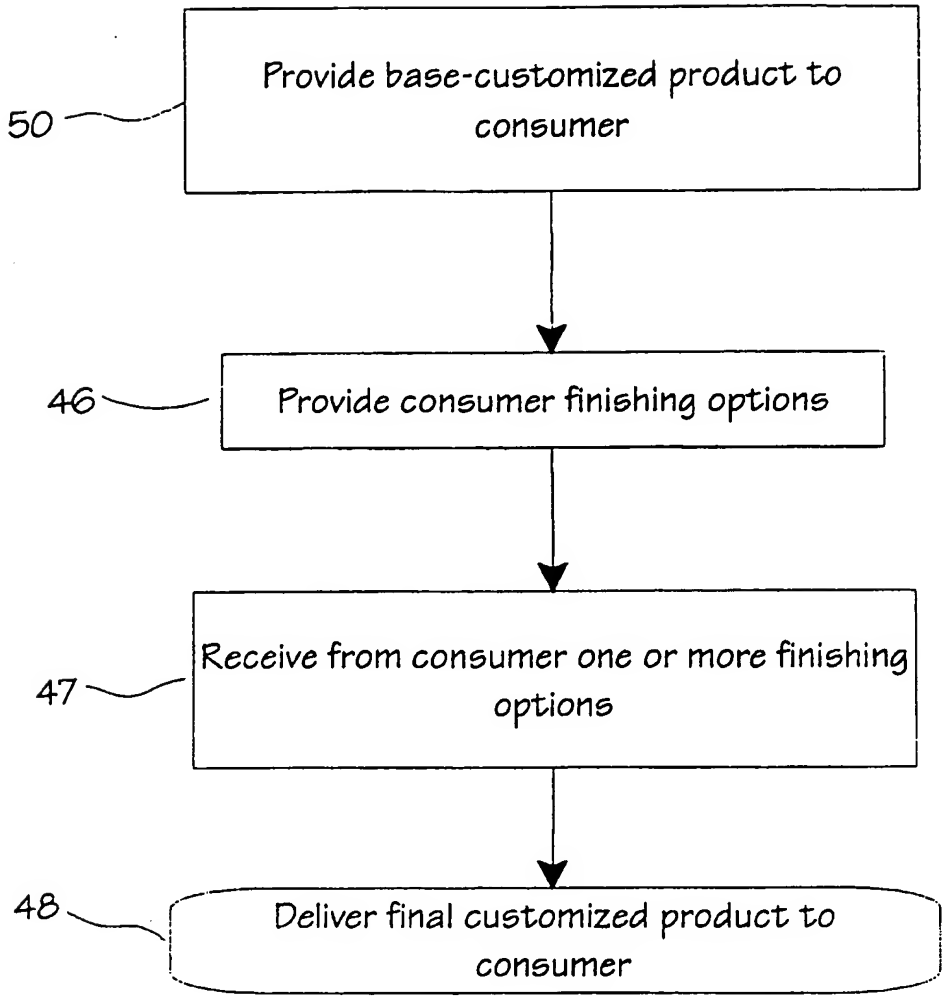
Provide base-customized product to consumer
50
Provide consumer finishing options
46
Receive from consumer one or more finishing options
47
Deliver final customized product to consumer
48

Fig. 3

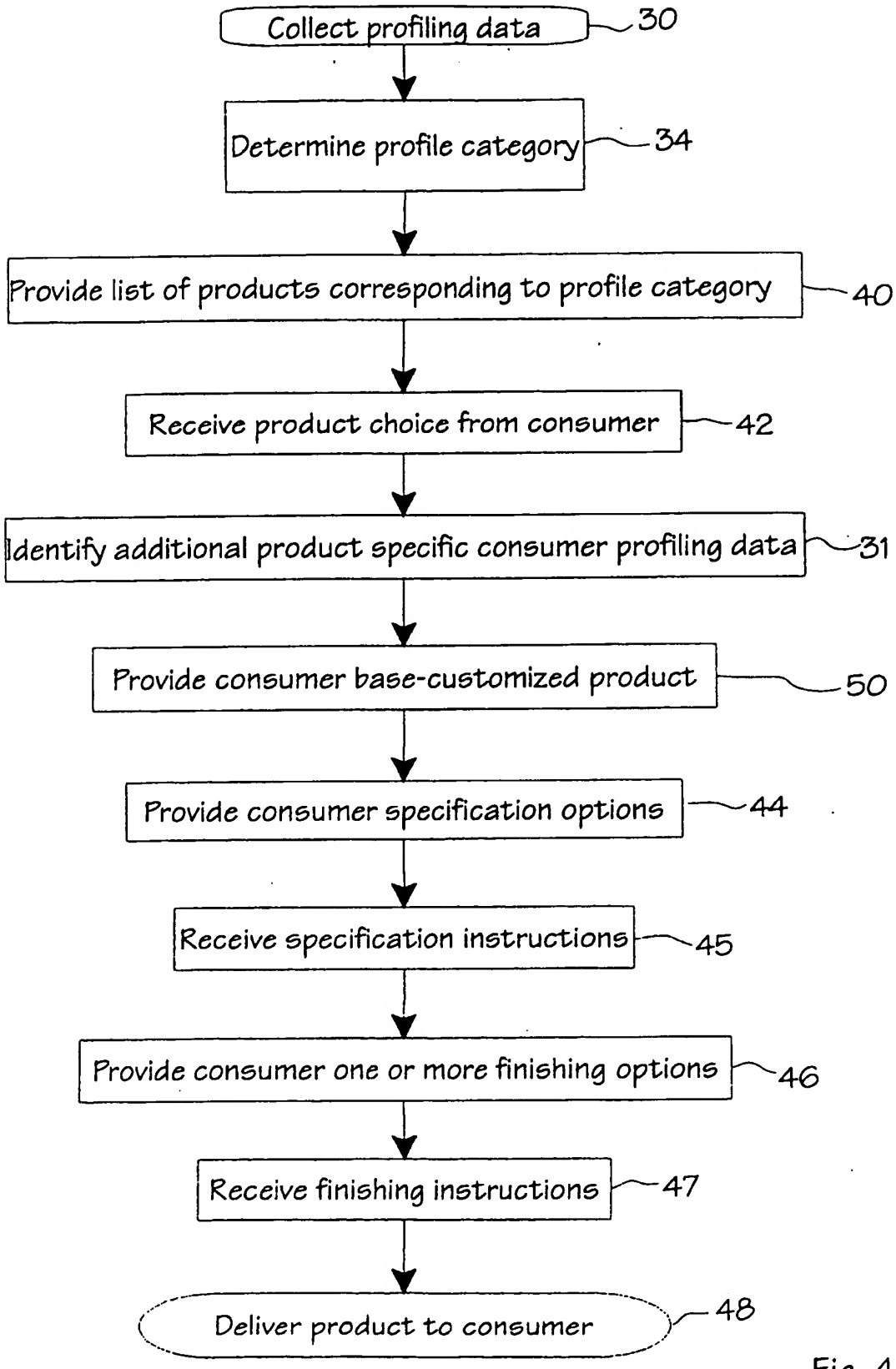
Collect profiling data
30
Determine profile category
34
Provide list of products corresponding to profile category
40
Receive product choice from consumer
42
Identify additional product specific consumer profiling data
31
Provide consumer base-customized product
50
Provide consumer specification options
44
Receive specification instructions
45
Provide consumer one or more finishing options
46
Receive finishing instructions
47
Deliver product to consumer
48

Fig. 4

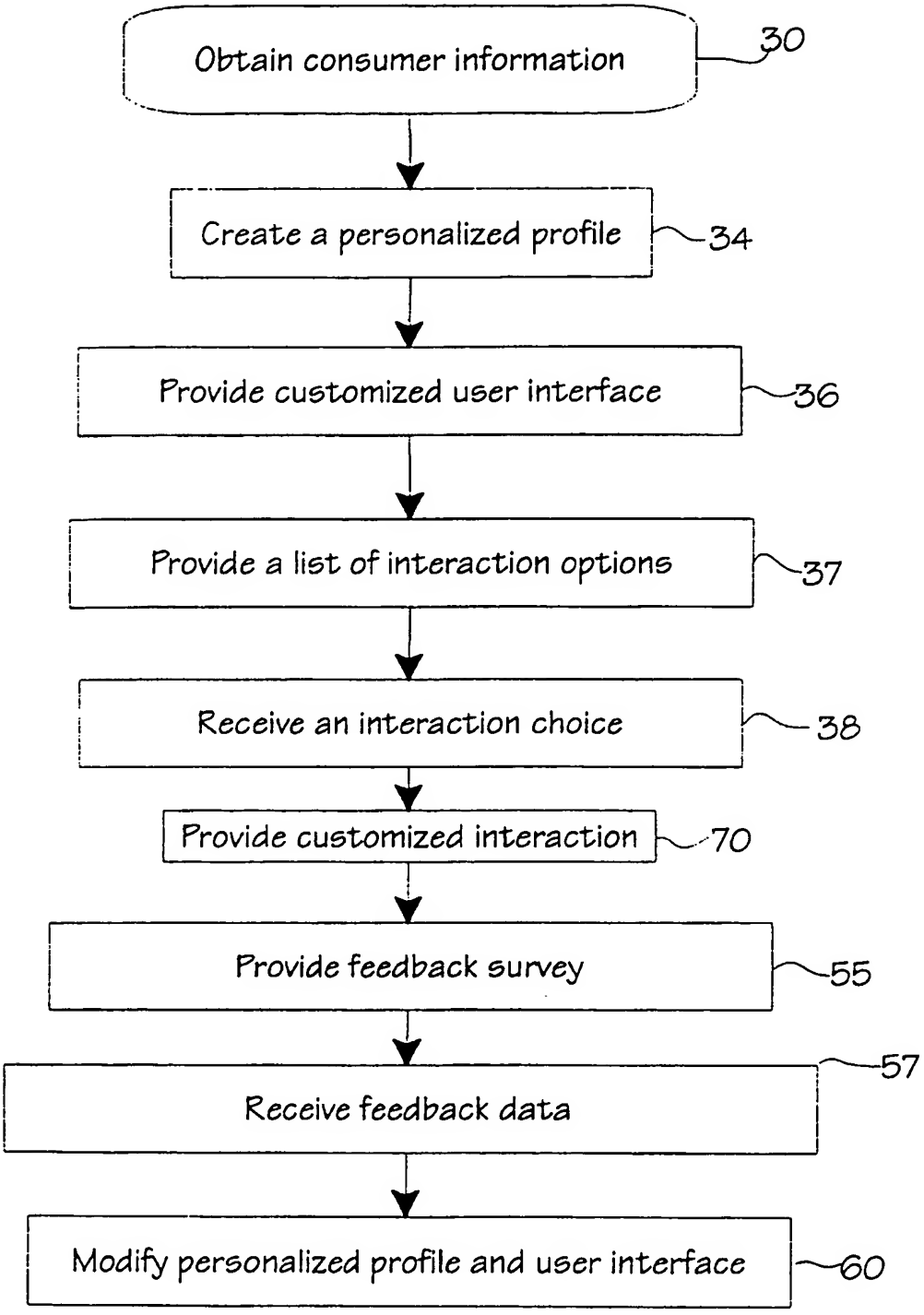
Obtain consumer information
30
Create a personalized profile
34
Provide customized user interface
36
Provide a list of interaction options
37
Receive an interaction choice
38
Provide customized interaction
70
Provide feedback survey
55
Receive feedback data
57
Modify personalized profile and user interface
60

Fig. 5

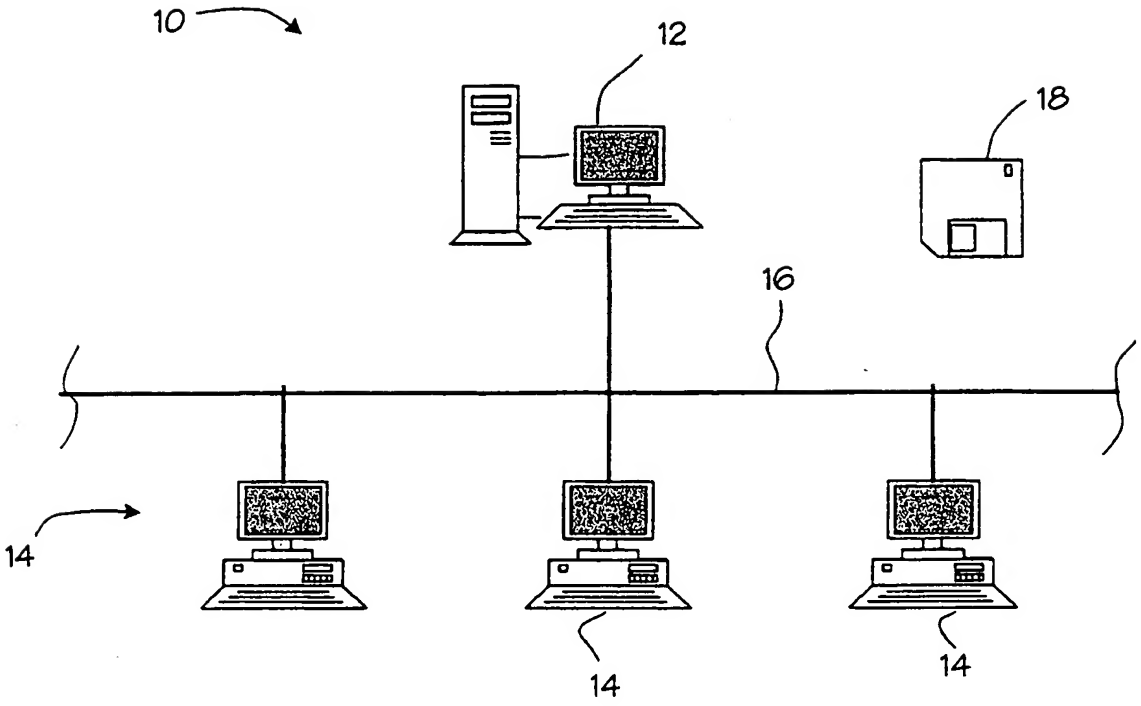

Fig. 6

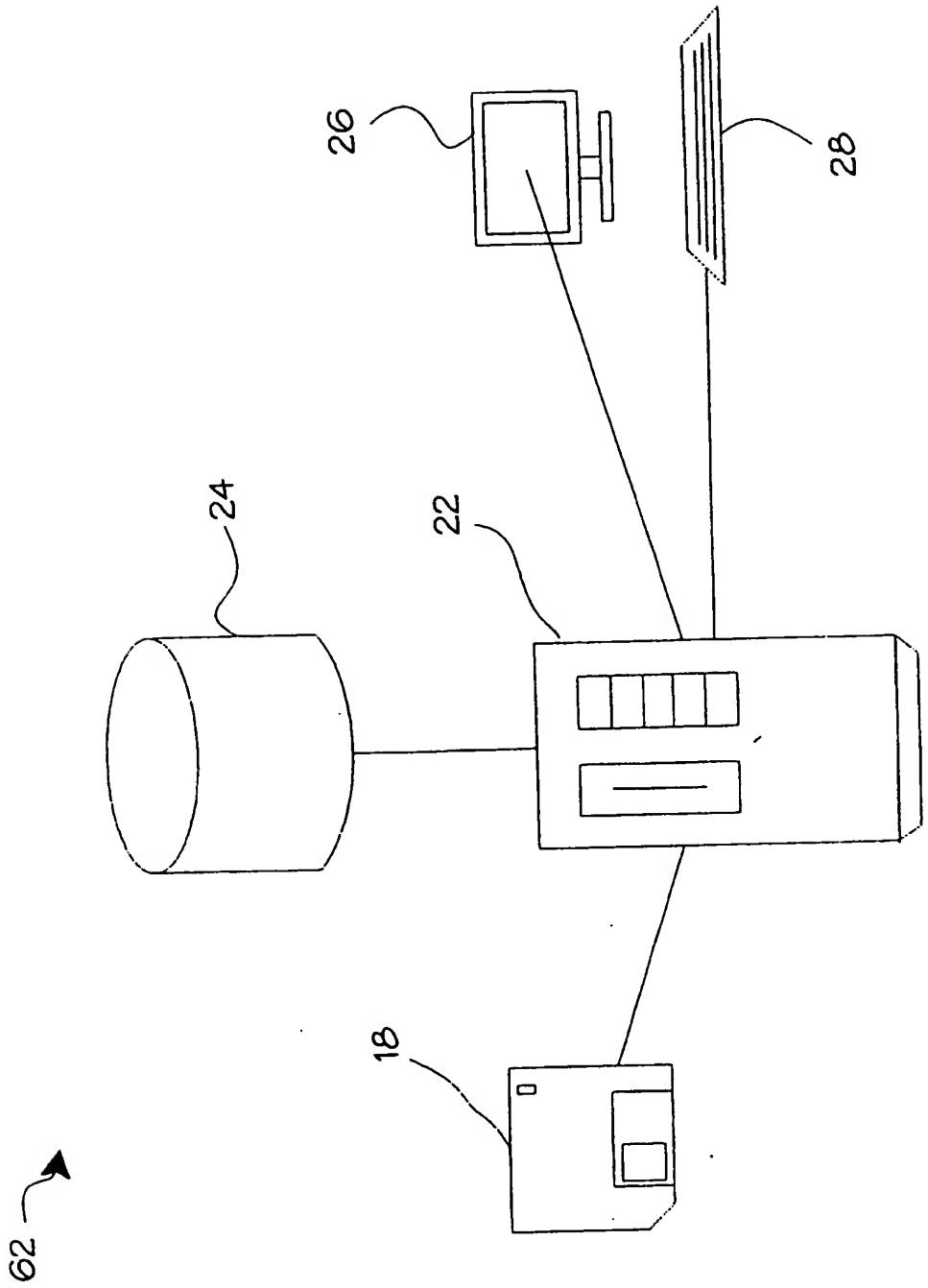

Fig. 7

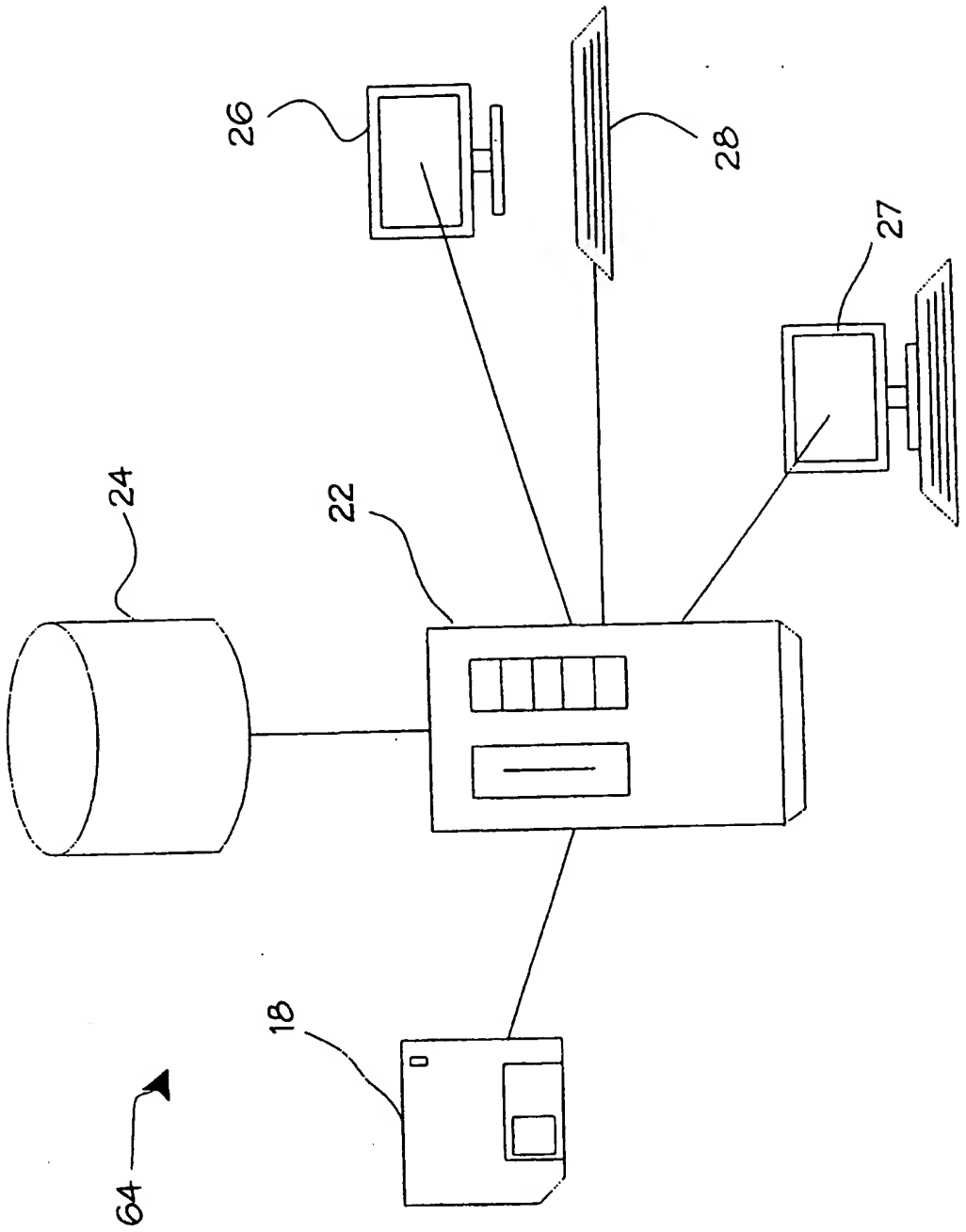

Fig. 8

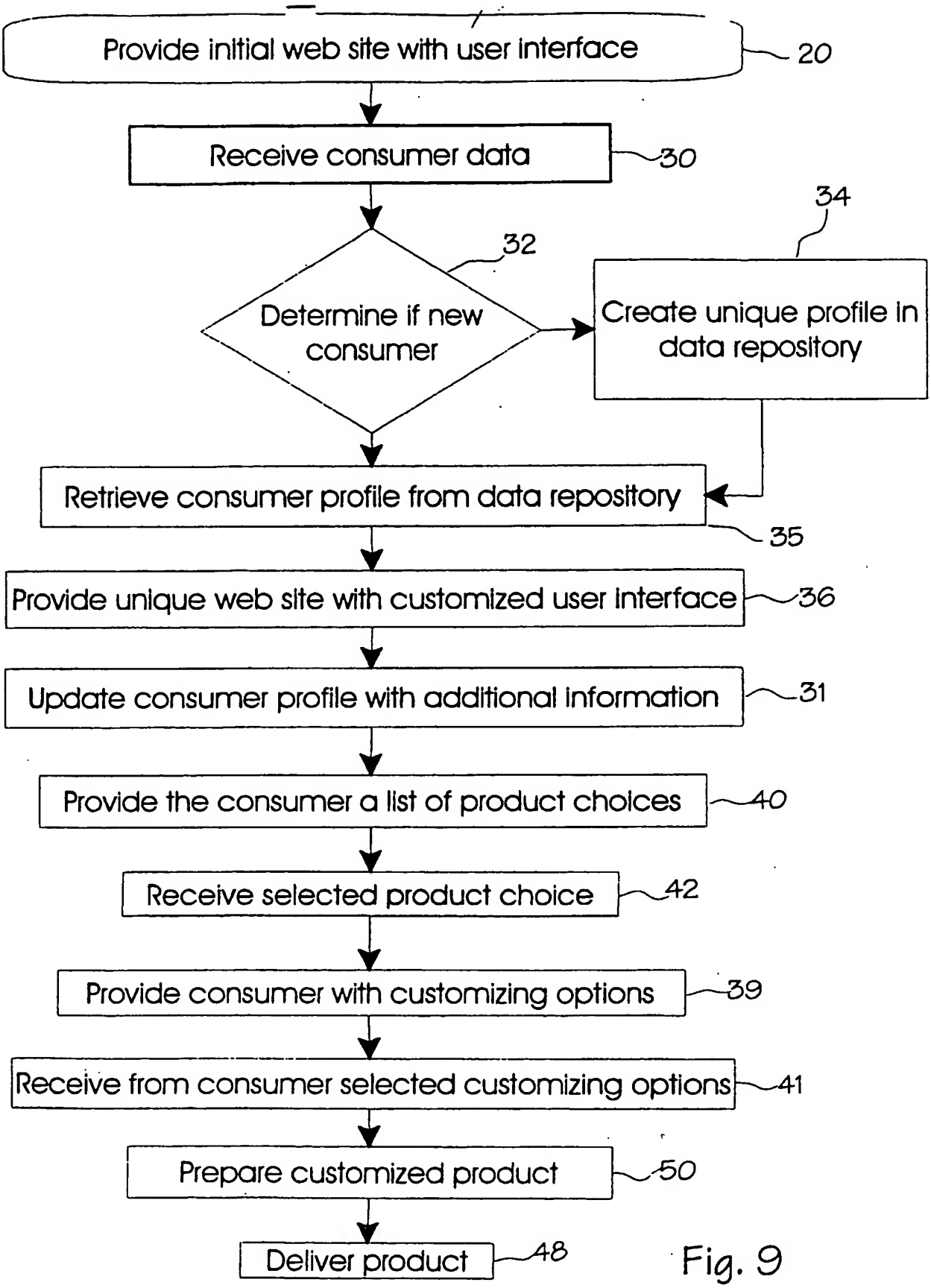
Provide initial web site with user interface
20
Receive consumer data
30
34
32
Determine if new consumer
Create unique profile in data repository
Retrieve consumer profile from data repository
35
Provide unique web site with customized user interface
36
Update consumer profile with additional information
31
Provide the consumer a list of product choices
40
Receive selected product choice
42
Provide consumer with customizing options
39
Receive from consumer selected customizing options
41
Prepare customized product
50
Deliver product
48

Fig. 9

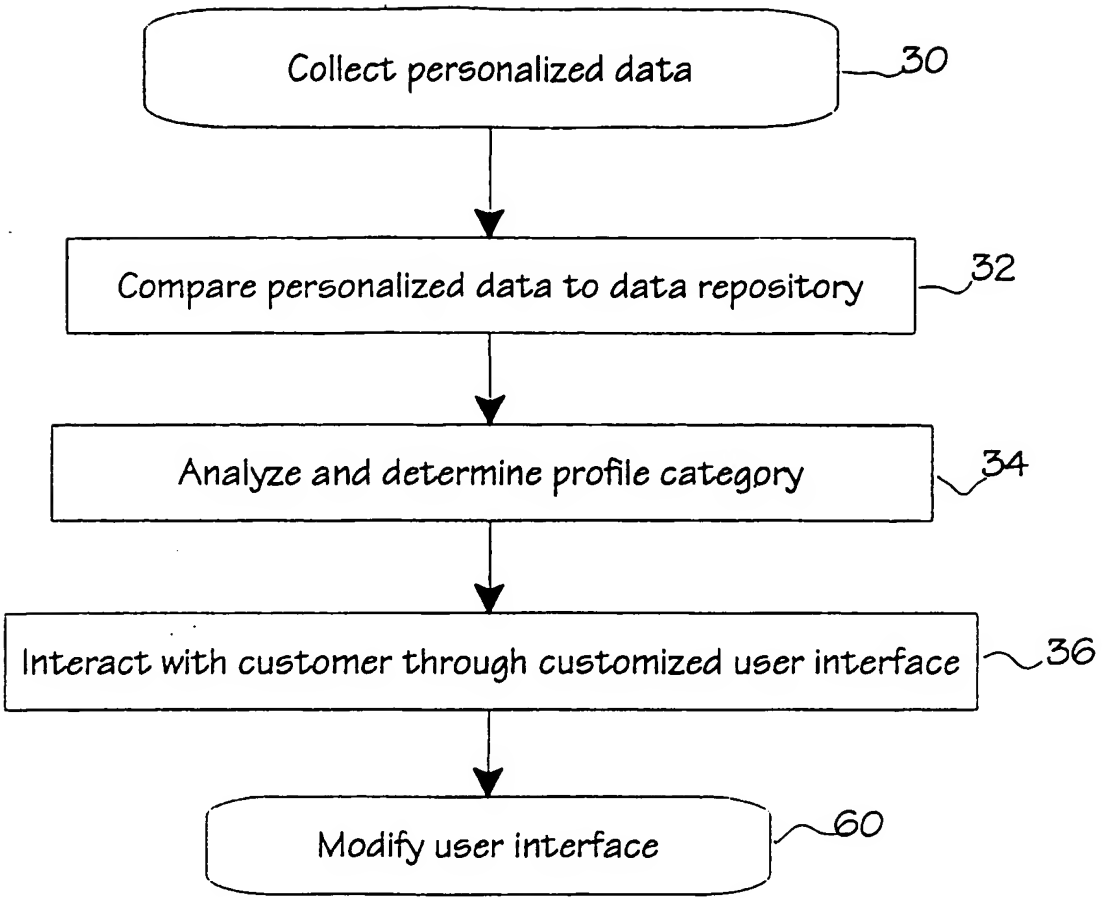
Collect personalized data
30
Compare personalized data to data repository
32
Analyze and determine profile category
34
Interact with customer through customized user interface
36
Modify user interface
60

Fig. 10

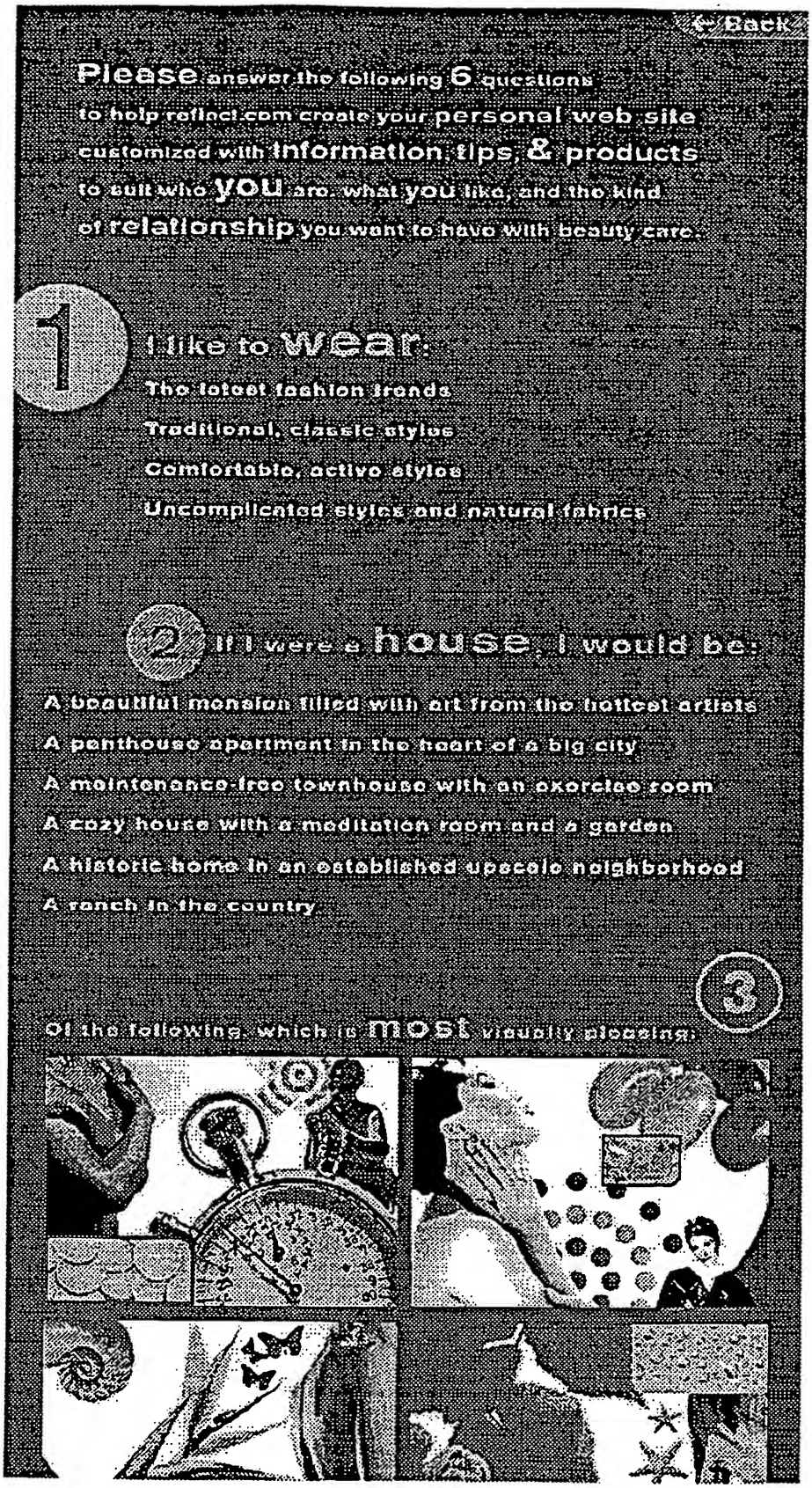
Back
Please answer the following 6 questions
to help reflect.com create your personal web site
customized with information, tips, & products
to suit who you are, what you like, and the kind
of relationship you want to have with beauty care.
1
I like to wear:
The latest fashion trends
Traditional, classic styles
Comfortable, active styles
Uncomplicated styles and natural fabrics
2
If I were a house, I would be:
A beautiful mansion filled with art from the hottest artists
A penthouse apartment in the heart of a big city
A maintenance-free townhouse with an exercise room
A cozy house with a meditation room and a garden
A historic home in an established upscale neighborhood
A ranch in the country
3
Of the following, which is most visually pleasing:

Fig. 11

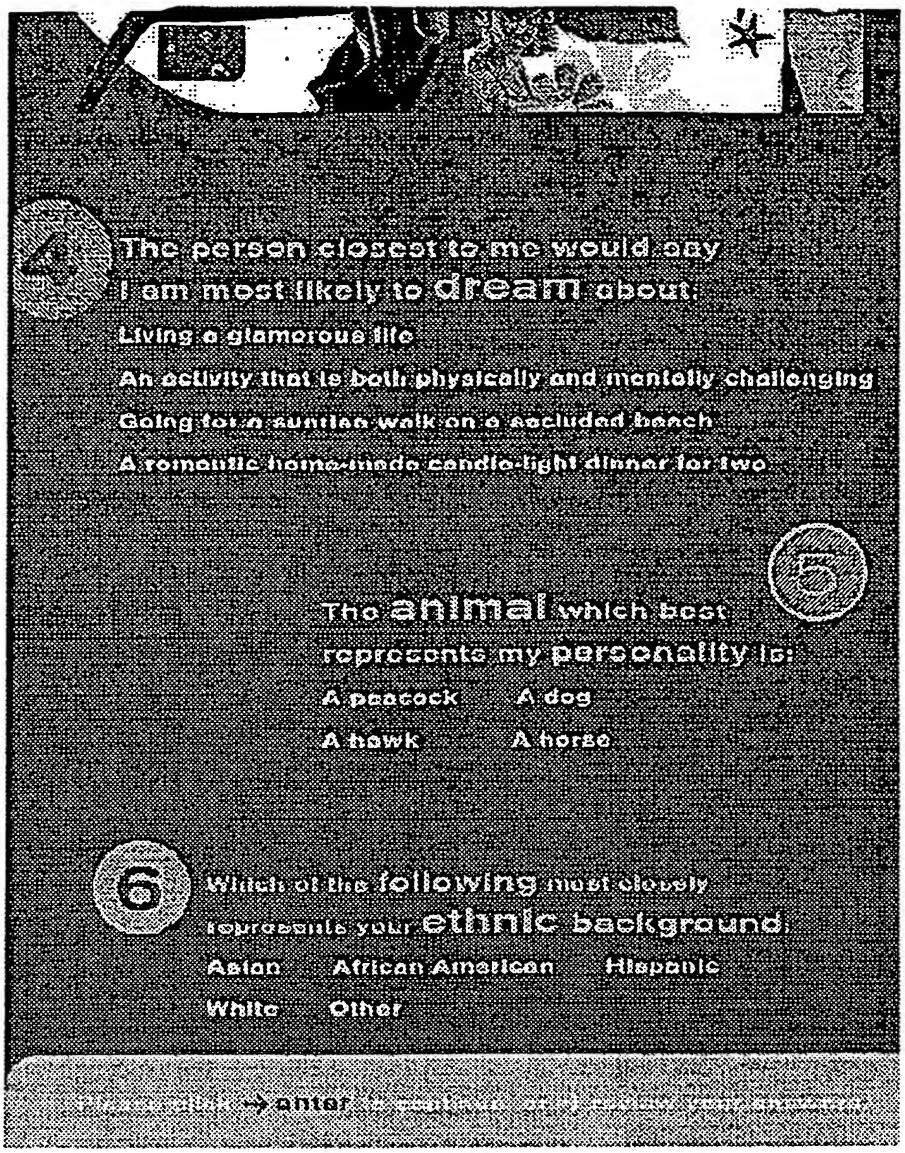
4
The person closest to me would say I am most likely to dream about:
Living a glamorous life
An activity that is both physically and mentally challenging
Going for a sunrise walk on a secluded beach
A romantic home-made candle-light dinner for two
5
The animal which best represents my personality is:
A peacock
A dog
A hawk
A horse
6
Which of the following most closely represents your ethnic background
Asian
African American
Hispanic
White
Other

Fig. 12

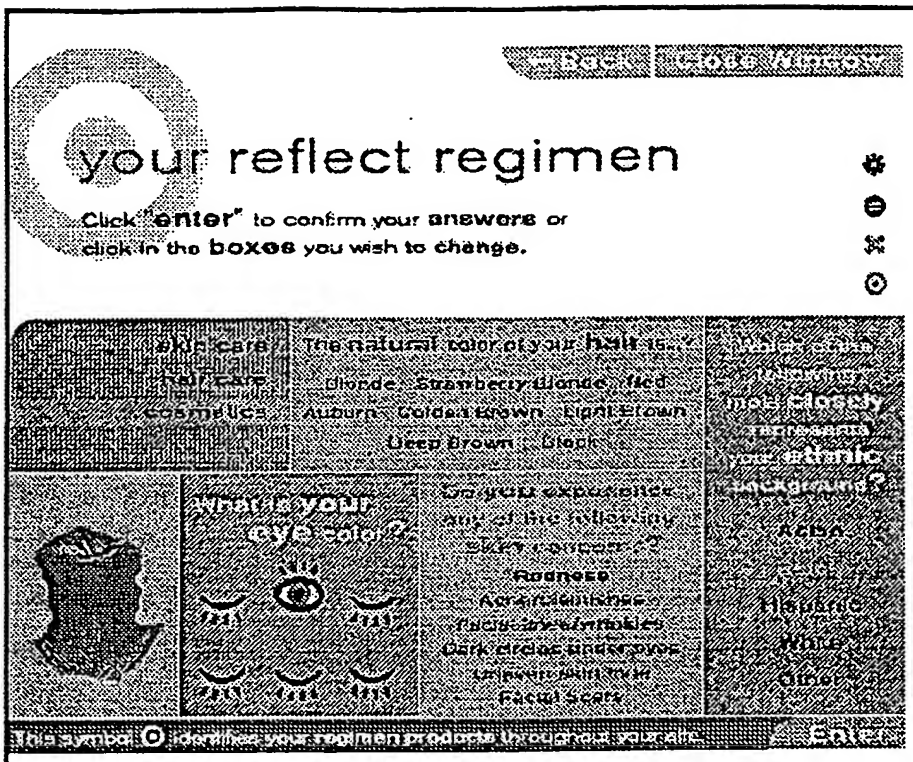

Fig. 13

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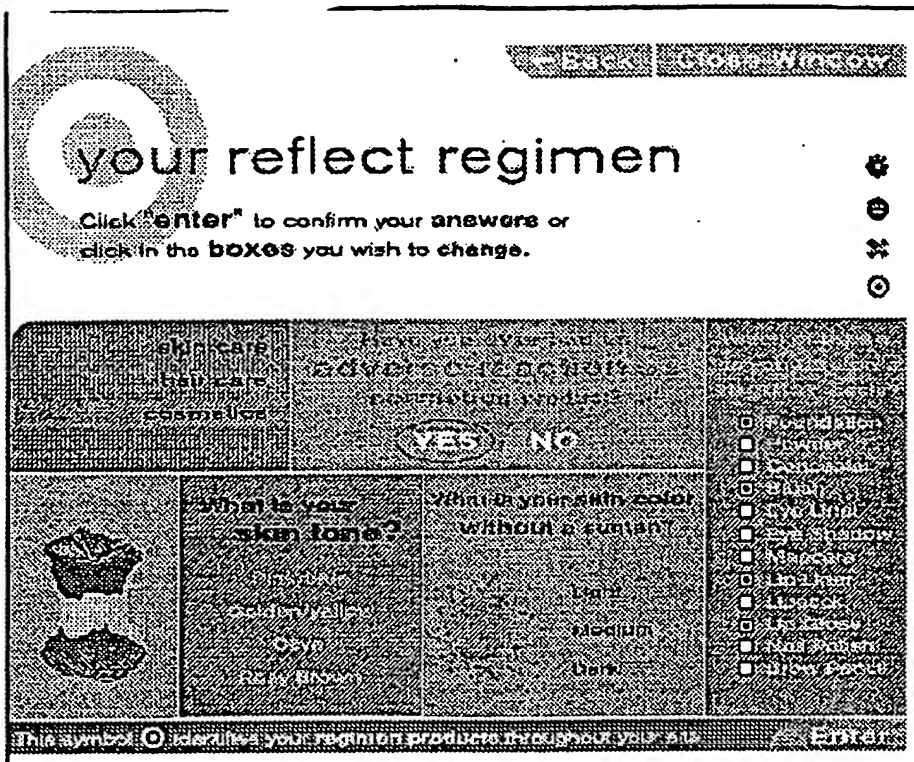

Fig. 14

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Fig. 15

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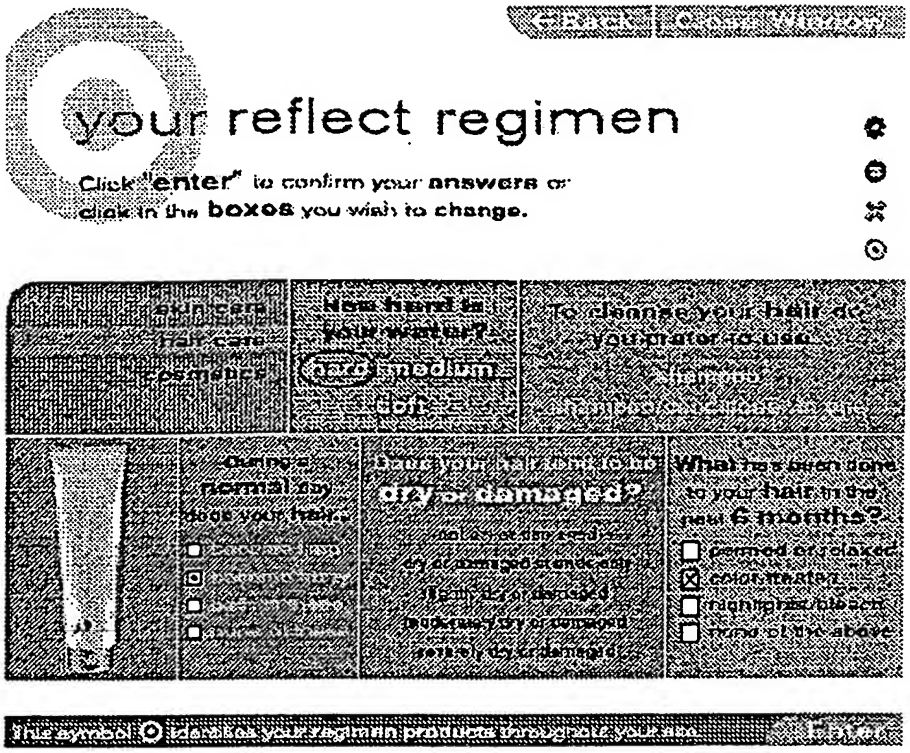

Fig. 16

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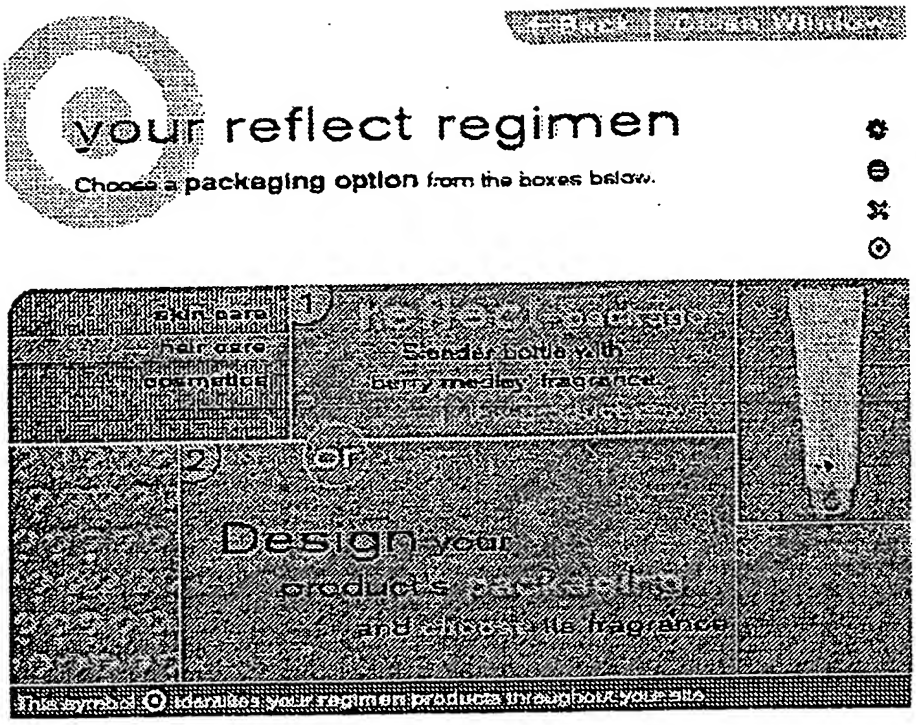

Fig. 17

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Fig. 18

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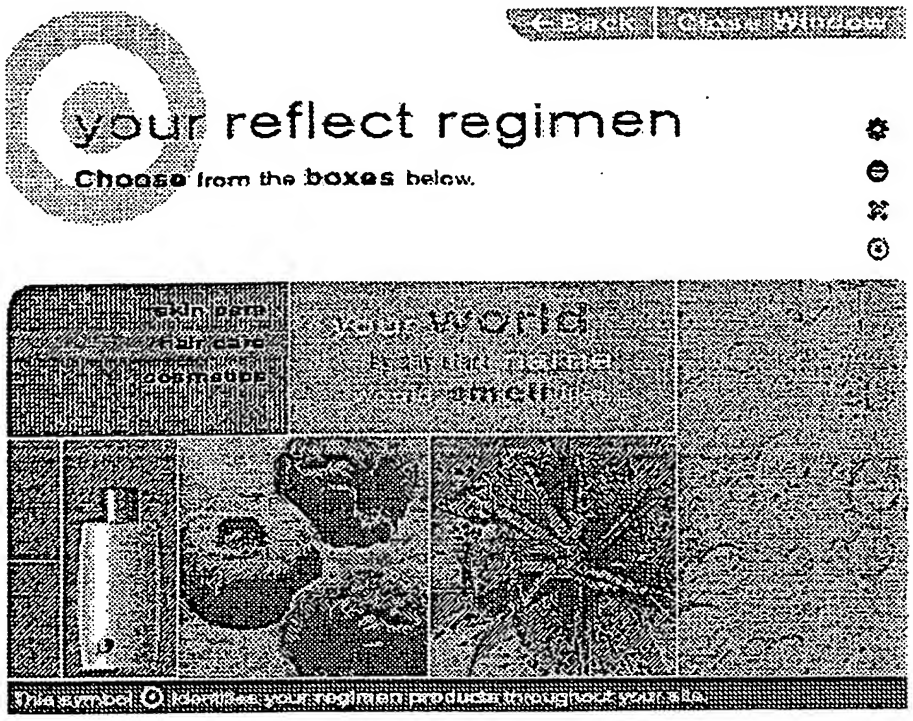

Fig. 19

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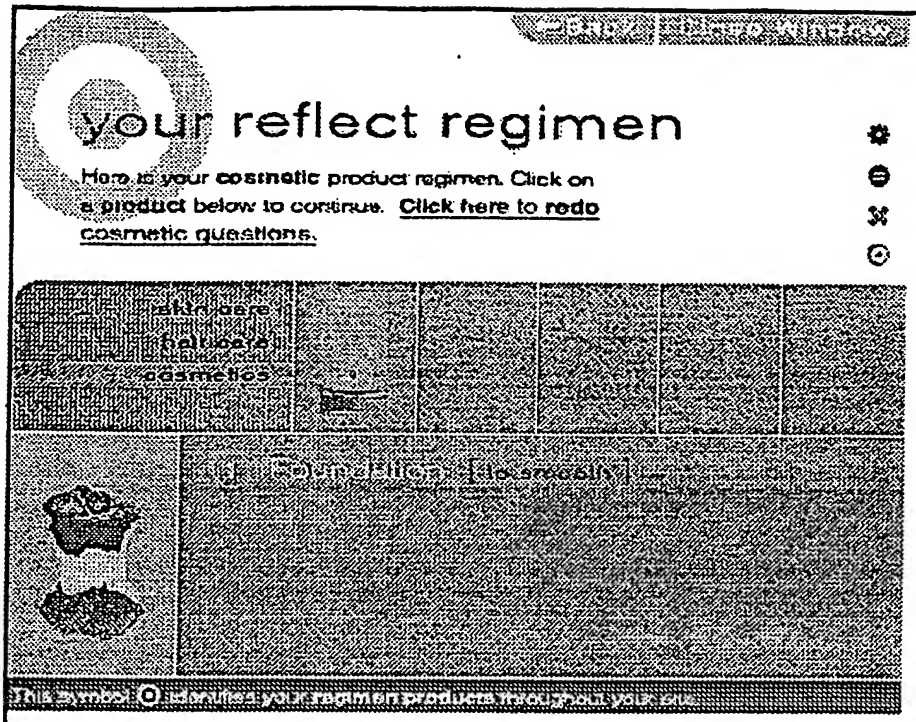

Fig. 20

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